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BIOLOGIA
CENTRALI-AMERICANA.

INSECTA.

COLEOPTERA. Vol. IV. Part 1.

HETEROMERA (part).

BY

GEORGE C. CHAMPION, F.Z.S.

1884–1893.

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INTRODUCTION.

The Heteromera include numerous heterogeneous families of Coleoptera, which agree *inter se* in having their tarsi distinctly 5-, 5-, 4-jointed *; and in the whole of the species here enumerated, *Mophon tinctipennis*, which has 4-jointed anterior tarsi in the male, is the single exception to this formula. The only other Coleoptera likely to be confounded with the Heteromera are certain members of the Cucujidæ and Cryptophagidæ, belonging to the Clavicorn-series, which have the hind tarsi 4-jointed in the males and 5-jointed in the females. The Heteromera comprise a greater variety of forms than any other of the main divisions of the Coleoptera, nearly all of which are, as it were, reproduced here. As examples of this assimilation, the following genera are especially noteworthy, viz.:—*Statira* (Lagriidæ) to various Carabidæ (*Agra*, *Calleida*, &c.); *Cuphotes* (=*Spheniscus*) to *Cypherotylus* (Erotylidæ); *Doliema* (Tenebrionidæ) to various Cucujidæ; *Uroplatopsis* (Lagriidæ) to various Hispidæ (*Uroplata*) and Lycidæ; *Calopus* (Œdemeridæ) to various Longicornia; *Othnius* to various Cleridæ; *Phrenapates* (Tenebrionidæ) to various Passalidæ; *Hapsida*, *Nautes*, and *Gonospa* to various Chrysomelidæ; *Diplectrus* (Œdemeridæ) to *Chauliognathus* (Telephoridæ); *Sisenes* (Œdemeridæ) to various Telephoridæ; *Nilio* to various Coccinellidæ and Endomychidæ; *Zypœtes* (Tenebrionidæ) to *Epierus* (Histeridæ); *Paratenetus* (Tenebrionidæ) to various Cryptophagidæ (*Cryptophagus* and *Corticaria*). Probably no better cases of so-called 'mimicry,' or homochroism, can be found amongst the Coleoptera than exists between certain species of *Cuphotes* and *Cypherotylus*, and between *Uroplatopsis* (*U. mimica*) and *Uroplata* (*U. dimidiata*).

Fourteen families altogether are represented in Mexico or Central America, which are here dealt with in two volumes: the Tenebrionidæ, Cistelidæ, Othniidæ, Nilionidæ, and Monommidæ in the first; the Lagriidæ, Melandryidæ, Pythidæ, Œdemeridæ, Xylophilidæ, Anthicidæ, Mordellidæ, Rhipidophoridæ, and Meloidæ in the second volume.

All these families are common to Central and North America, with the exception of the Nilionidæ, a small group peculiar to the forest-region of Tropical America; two of

* In an aberrant Old-World genus, *Heterotarsus*, Latr., they are 4-, 4-, 3-jointed.

them, the Othniidæ and the Xylophilidæ, contain as yet no described species from the South American continent, but both are certainly represented there. The Ægialitidæ, Cephaloidæ, Pyrochroidæ, and Stylopidæ, so far as at present known, are absent from the Central American fauna: the first two of these families contain but a single species each, and are both confined to Boreal America. The Pyrochroidæ are mostly restricted to the temperate or boreal regions of the Northern hemisphere; four genera are known as occurring in North America, one of which, *Ischalia*, may, perhaps, be found eventually in Northern Mexico. The Stylopidæ, parasitic upon Hymenoptera and Homoptera, are very widely distributed, and the family can scarcely be unrepresented within our limits; these insects, however, are everywhere very rare, and seldom met with by ordinary collectors.

The total number of species of Heteromera here enumerated from Mexico and Central America is 1776, belonging to 261 genera; 1295 species and 92 genera are described as new. In Gemminger and Harold's 'Catalogue' (1870) 6827 species are given for the whole world, and since that time nearly as many more have been described, so that at the present time Mexico and Central America furnish about 13 per cent. of the named species of the whole world.

The following analysis shows the number of genera and species in each of the fourteen families; and the Table (pp. vii–xvi) gives the geographical distribution of the genera, with the number of species of each genus. The generic names printed in "clarendon type" are new; those placed within brackets belong to genera doubtfully found in the Central-American Fauna. The Republics of Honduras and Salvador are omitted from the "Table," as no material has come to hand from those places.

Families.	Total number of species.	Total number of genera.	New species described.	New genera described.
Tenebrionidæ	870	145	594	49
Cistelidæ	158	24	150	15
Othniidæ	6	1	5	—
Nilionidæ	4	1	3	—
Monommidæ	12	2	7	1
Lagriidæ	107	9	97	6
Melandryidæ	45	20	40	9
Pythidæ	7	5	6	3
Œdemeridæ	90	12	84	5
Xylophilidæ	45	2	44	1
Anthicidæ	93	8	69	—
Mordellidæ	158	12	147	3
Rhipidophoridæ	21	3	11	—
Meloidæ	160	17	38	—
	1776	261	1295	92

Geographical Distribution of the Genera of Heteromera represented within the limits of Mexico and Central America.

Total number of species.	New species described.		America north of Mexico.	Central America. North Mexico.	Central America. Central and S. Mexico.	Central America. Yucatan.	Central America. B. Honduras.	Central America. Guatemala.	Central America. Nicaragua.	Central America. Costa Rica.	Central America. Panama.	Tropical S. America.	Andean and extra-tropical S. Am.	Antilles.	
		TENEBRIONIDÆ.													
1	1	**Pimeliopsis**	..	..	*										
3	—	Triorophus	*	*											
2	2	Trimytis	*	*	*										
2	1	[Trientoma]	..	..	?	..	..	..	..	..	..	..	..	*	
3	3	**Mesabates**	..	*	*										
1	1	**Pescennius**	..	..	*										
1	1	**Sœmias**	..	..	*										
2	2	**Mencheres**	..	..	..	..	..	*	*						
1	1	**Posides**	..	..	*										
2	1	Eurymetopon	*	*											
29	28	Emmenastus	*	*	*	*	*	*	*	*	*	†	..	..	The apterous species do not extend south of Mexico.
13	13	Schœnicus	*	*	*	*	†	*	*	*	*	†			
37	31	Epitragus	*	*	*	*	*	*	*	*	*	*	*	*	? Introduced in Sandwich Islands.
3	3	**Tydeolus**	..	..	*										
14	6	Zopherus	*	*	*	*	..	*	*	*	..	*			
16	13	Nosoderma	..	*	*	*	*	..	..	..	..	*	..	*	? Also Usambara, E. Africa.
3	1	Aræoschizus	*	*	*										
1	—	Dacoderus	*	*	..	..	..	..	..	..	..	..	..	*	
55	42	Asida (Tisamenes, Ucalegon, Zaleucus, and Poliorcetes.)	*	*	*	..	..	..	..	..	..	..	..	..	Also very numerous in species in Europe and N. Africa.
1	—	Microschatia	*	*											
7	6	Astrotus	*	*	*										
1	1	**Sicharbas**	..	..	*										
7	5	Ologlyptus	*	*	*										
1	—	[Psectrascelis]	..	?	..	..	..	..	..	..	..	*	*		
2	1	Branchus	*	..	*	..	..	*	*	..	..	..	..	..	Also Bahamas.
1	—	Anectus	..	..	..	..	*								
1	1	**Oxinthas**	..	..	*										
4	2	Cryptoglossa	*	*											
3	—	Centrioptera	*	*											
10	6	Eusattus	*	*	*										
60	26	Elæodes	*	*	*	†	..	*	..	..	..	..	..	..	Just reaches the Los Altos region of Guatemala.
1	—	Embaphion	*	*											
288	198														

† Not yet recorded.

Geographical Distribution (con.).

Total number of species.	New species described.		America north of Mexico.	Central America. North Mexico.	Central and S. Mexico.	Yucatan.	B. Honduras.	Guatemala.	Nicaragua.	Costa Rica.	Panama.	Tropical S. America.	Andean and extra-tropical S. Am.	Antilles.	
288	198	TENEBRIONIDÆ (*con.*).													
10	7	Argoporis	*	*	*										
1	—	[Ammophorus]	..	..	..	..	..	..	..	..	?	*	*	..	Also Galapagos Is. Recorded by mistake from Sandwich Is.
1	—	Diceroderes	..	..	*	..	..	*							
1	1	**Œnopion**	..	..	*										
3	2	Centronopus	*	*	*	*									
1	—	**Pyres**	..	..	..	..	..	..	*	..	..	*			
4	1	Rhinandrus	*	*	*	*	†	†	*						
11	2	Zophobas	..	..	*	*	*	*	*	*	*	*	..	*	Introduced in St. Helena.
1	—	Alobates	*	*											
1	—	Tauroceras	..	..	*	..	*	*	*	..	..	*			
2	1	Nyctobates	..	*	*	*	*	*	*	†	*	*			
8	7	Nuptis	..	..	*	*	†	*	*	†	*	*			
2	2	**Œatus**	..	..	*	†	*	*	†	*					
1	1	**Hicetaon**	..	..	*	*	*								
1	1	**Sthenobœa**	..	..	*	..	..	..	..	..	..	*			
2	2	Glyptotus	*	..	*	*	..	..	*						
3	3	**Isicerdes**	..	..	*	*	*	*	†	†	*				
6	6	**Hesiodus**	?	..	*	*	†	*	*	†	*	*	..	*	
1	1	**Ilus**	..	..	..	..	..	..	..	*					
2	2	**Choastes**	..	..	..	..	*	*	*	†	*	*			
1	—	[Tenebrio]	*	..	..	..	..	..	..	*	..	..	..	..	Cosmopolitan. Origin doubtful.
2	2	**Rhacius**	..	..	*	*	*	*	*	..	..	*	..	*	
1	—	Eupsophus	*	?											
2	—	Hopatrinus	*	..	*	*	*	*	..	..	..	*	..	*	In Central America restricted to Atlantic slope.
1	—	[Pedonœces]	..	..	..	..	..	..	..	..	?	..	*	..	Probably recorded from Panama by mistake. The other described species are from the Galapagos Is.
27	22	Blapstinus	*	*	*	*	†	*	*	*	*	*	*	*	
2	2	Notibius	*	..	*										
2	2	Conibius	*	*	*	..	..	*							
3	3	Ulus	*	*	*	*	..	*	..	..	*	..	..	..	Atlantic and Pacific coasts; also inland.
1	1	**Penichrus**	..	..	..	..	..	..	..	..	*	*			
3	2	Trichoton	*	*	..	..	..	..	*	..	*	*	*		
1	1	Cnemeplatia	*	..	..	..	..	..	..	..	*	..	..	..	Also Europe, N. Africa, and Madeira.
4	4	Crypticus	*	..	*	†	*	*	*	†	*	*	*	..	Also Europe, Asia, Africa, Canary Is., Australia, &c.
400	276														

† Not yet recorded.

Geographical Distribution (con.).

Total number of species.	New species described.		America north of Mexico.	Central America. North Mexico.	Central America. Central and S. Mexico.	Central America. Yucatan.	Central America. B. Honduras.	Central America. Guatemala.	Central America. Nicaragua.	Central America. Costa Rica.	Central America. Panama.	Tropical S. America.	Andean and extra-tropical S. Am.	Antilles.	
400	276	TENEBRIONIDÆ (*con.*).													
1	—	Phrenapates	..	..	..	..	..	*	*	*	*	*			
1	1	**Daochus**	..	..	..	..	*	*							
1	—	Peneta	..	..	..	..	..	..	..	..	*	*			
1	—	**Cleolaus**	..	..	*										
1	1	**Telchis**	..	..	..	..	..	..	..	..	*				
2	2	Phthora	*	..	*	..	..	*	..	..	..	..	..	..	Also Europe. ? Lifu I.
1	1	**Zypœtes**	..	..	*	..	..	*	*						
1	1	**Arrhabæus**	..	..	..	..	..	..	..	*	*	..	..	*	
1	—	[Gnathocerus]	*	..	*	..	..	*	..	..	..	..	*	..	Cosmopolitan. Origin doubtful.
3	2	Echocerus	*	..	*	*	†	*	*	†	†	*	..	*	Introduced into Madeira and Canary Is.
2	2	**Sicinus**	..	..	..	..	..	*							
2	2	**Iccius**	..	..	*	..	..	*							
2	—	[Tribolium]	*	*	*	..	..	*	..	..	*	..	..	*	Cosmopolitan. Origin doubtful
2	—	Alegoria	..	..	*	†	*	*	*	†	*	*	..	*	
1	1	**Pheres**	..	..	..	..	..	..	..	..	*				
1	1	**Uleda**	..	..	*	..	..	..	..	..	..	*			
1	—	Antimachus	..	..	..	..	..	..	*	..	..	*			
7	5	Uloma	*	†	*	†	*	*	*	*	*	*	..	*	Generally distributed.
1	1	Cynæus	*	*											
2	—	[Alphitobius]	*	*	*	*	..	..	..	*	*	*	*	*	Cosmopolitan. Origin doubtful.
1	—	Aphanotus	*	*											
6	4	Doliema	*	†	*	*	*	*	*	†	*	*	*	*	Also Java, Manila, Batchian, and Ceylon.
3	2	Sitophagus	..	*	*	*	*	*	*	*	*	*	..	*	Introduced into Europe and Madeira.
6	3	Ulosonia	*	*	*	*	*	*	*	*	*	*	..	*	
2	—	Metulosonia	..	..	*	..	*	*	*	†	*	*			
1	1	**Phayllus**	..	..	*	†	*	*	*	†	*	*			
1	1	**Æsymnus**	..	..	*										
3	2	**Mophis**	..	..	*	..	..	*							
6	4	Corticeus (Hypophlœus)	*	†	*	†	*	*	*	†	*	*	..	*	Generally distributed, including Australia.
1	—	[Palorus]	*	*	..	..	..	..	..	..	..	..	..	..	Cosmopolitan. Origin doubtful.
1	—	Diaperis	*	..	*	..	†	*	..	..	..	*	..	*	Generally distributed, except S. Africa and Australia.
15	9	Arrhenoplita (Hoplocephala)	*	†	*	*	*	*	*	†	*	*	*	*	Almost universal, including many Oceanic islands.
1	1	**Saptine**	..	..	*										
481	323														

† Not yet recorded.

Geographical Distribution (con.).

Total number of species.	New species described.		America north of Mexico.	Central America. North Mexico.	Central America. Central and S. Mexico.	Central America. Yucatan.	Central America. B. Honduras.	Central America. Guatemala.	Central America. Nicaragua.	Central America. Costa Rica.	Central America. Panama.	Tropical S. America.	Andean and extra-tropical S. Am.	Antilles.	
481	323	TENEBRIONIDÆ (*con.*).													
48	23	Platydema	*	*	*	*	*	*	*	*	*	*	*	*	Generally distributed, including Australia, Sandwich Is., &c.
7	2	Liodema	*	..	*	*	†	*	*	†	*	*			
1	1	Stenoscapha	..	..	*	..	..	..	..	..	..	*			
1	1	**Paniasis**	..	..	*										
1	1	**Lelegeis**	..	..	*										
2	1	Cosmonota	..	..	*	..	*	*	*	..	..	*			
9	4	Hapsida	..	..	*	*	*	*	*	*	*	*			
1	1	**Gonospa**	..	..	..	..	..	..	..	..	*	*			
2	2	Ennebœus	..	..	*	..	..	..	..	..	*	*	..	..	Also Tasmania.
9	8	Phaleria	*	*	*	*	*	*	*	†	*	*	*	*	Sea-coasts generally, except Australia.
1	—	Bycrea	..	..	*										
1	—	Scaptes	..	*	*	..	..	..	*	..	*	*	?	*	
1	1	**Xenius**	..	..	..	..	..	..	*						
2	1	Calymmus	..	..	*	*	..	*	*	..	*	*			
4	4	Ozolais	..	..	..	..	..	..	*	*	*	*			
6	4	Goniadera	..	..	*	*	*	*	*	*	*	*			
2	2	**Xanthicles**	..	..	..	..	..	..	..	*					
1	1	Æmymone	..	..	*	..	..	..	..	..	..	..	*		
11	10	Anædus	*	*	*	*	*	*	*	*	*	*	..	*	
16	14	Paratenetus	*	†	*	†	*	*	*	†	*	*			
2	1	Cyrtosoma	..	..	*	..	*	*	*	*	*	*	..	*	
1	1	**Othryoneus**	..	..	..	..	..	..	*	..	..	*			
1	1	Camaria	..	..	..	..	..	..	..	..	*	*	*	..	Also ? Madagascar and China.
1	1	Blapida	..	..	..	..	..	*	*	..	..	*		..	
1	1	**Mophon**	..	..	..	..	..	..	*	..	*				
3	3	**Epicalla**	..	..	*	..	..	..	*	..	*	*			
2	2	**Mœon**	..	..	..	..	..	..	..	..	*			..	
1	—	Elomosda	..	..	..	..	..	*	*						
12	10	Acropteron	..	..	*	..	†	*	*	*	*	*	*	*	
1	1	**Pseudapocrypha**	..	..	*	..	..	*							
1	1	**Saziches**	..	..	..	..	..	*							
9	6	**Oxidates**	..	..	*										
3	2	**Mitys**	..	..	*										
2	2	**Isaminas**	..	..	..	..	..	*	*	*					
18	12	Hegemona	..	..	*	*	*	*	*	*	*	*	..	..	All the described species but one are from Central America.
665	448													..	

† Not yet recorded.

Geographical Distribution (con.).

Total number of species.	New species described.		America north of Mexico.	Central America. North Mexico.	Central America. Central and S. Mexico.	Central America. Yucatan.	Central America. B. Honduras.	Central America. Guatemala.	Central America. Nicaragua.	Central America. Costa Rica.	Central America. Panama.	Tropical S. America.	Andean and extra-tropical S. Am.	Antilles.	
665	448	TENEBRIONIDÆ (*con.*).													
1	—	Dinomus	..	..	*	..	..	..	..	..	..	..	..	...	Recorded from Mexico, but not since corroborated.
20	18	Nautes	..	..	*	†	*	*	*	†	*	*			
51	42	Tarpela	†	*	*	*	*	*	*	†	*	*	..	†	Chiefly tropical.
18	15	Helops	*	*	*	†	†	*	†	†	*	*	..	*	Generally distributed, except Australia and S. Africa.
3	3	Mentes	..	..	..	..	..	*	..	..	*				
13	11	Talanus	*	†	*	†	*	*	*	*	*	*	..	*	Chiefly tropical.
6	3	Pyanisia	..	*	*	..	*	*	*	†	*	*	..	*	
6	2	Cuphotes (Spheniscus)	..	..	*	..	†	*	*	*	*	*			
10	10	Pœcilesthus	..	..	*	..	†	*	*	*	*	*			
69	34	Strongylium	*	*	*	*	*	*	*	*	*	*	..	*	Chiefly tropical, also warmer parts of Asia and Africa.
7	7	Otocerus (Hoploptera)	..	..	..	..	..	*	*	..	*	*			
1	1	Pseudotocerus	..	..	..	..	..	..	*	..	..	*			
870	594														
		CISTELIDÆ.													
46	45	Lobopoda	*	*	*	*	*	*	*	*	*	*	*	*	Chiefly tropical.
1	1	Temnes	..	..	..	..	..	..	..	..	*				
11	11	Allecula	..	..	*	*	†	*	*	†	*	*	*	?	Also Europe.
8	8	Alethia	..	*	*										
1	1	Theatetes	..	..	*										
5	5	Charisius	..	..	*	..	..	*							
1	1	Narses	..	..	..	..	..	*							
39	37	Hymenorus	*	*	*	*	†	*	*	..	..	..	..	..	Also Europe, Asia Minor, &c.
1	1	Æanes	..	..	*										
1	1	Polyidus	..	..	*	..	..	*							
2	2	Menes	..	..	*	*									
2	2	Menœceus	*	..	*	..	..	*							
1	1	Diopœnus	..	..	*										
1	1	Pitholaus	..	..	..	..	..	*							
1	1	Amaropsis	..	..	*										
9	9	Phedius	..	..	*										
1	1	Telesicles	*	*											
12	12	Cistela	*	*	*	†	†	*	*	*	*	†	..	..	Also Europe, &c.
5	4	Isomira	*	†	*	†	..	*	..	..	..	..	..	..	Also Europe, N. Africa, &c.
148	144														

† Not yet recorded.

Geographical Distribution (con.).

Total number of species.	New species described.		America north of Mexico.	Central America. North Mexico.	Central America. Central and S. Mexico.	Central America. Yucatan.	Central America. B. Honduras.	Central America. Guatemala.	Central America. Nicaragua.	Central America. Costa Rica.	Central America. Panama.	Tropical S. America.	Andean and extra-tropical S. Am.	Antilles.	
148	144	CISTELIDÆ (*co.*).													
2	2	**Erxias**	..	..	..	..	..	..	*	..	*				
1	1	Prostenus	..	..	..	..	..	..	..	..	*	*	*		
3	3	Lystronychus	*	..	*	*	†	*	*	†	*	*			
3	—	Xystropus	?	..	*	..	..	..	*	†	*	*	.	..	Doubtfully Californian. In Mexico reaches to Isthmus of Tehuantepec only.
1	—	Cteisa	..	..	*	..	..	..	..	..	*	*			
158	150														
		OTHNIIDÆ.													
6	5	Othnius (Elacatis)	*	..	*	..	†	*	†	†	*	?	..	..	Also Borneo, Batchian, Ceylon, Japan, Siberia, &c.
		NILIONIDÆ.													
4	3	Nilio	..	..	..	..	..	*	*	†	*	*			
		MONOMMIDÆ.													
11	6	Hyporhagus	*	*	*	*	†	*	*	†	*	*	*	*	
1	1	**Aspathines**	..	..	..	*	†	*	†	†	*	..	..	*	
12	7														
		LAGRIIDÆ.													
83	75	Statira	*	*	*	*	*	*	*	*	*	*	..	*	Chiefly tropical.
9	9	**Uroplatopsis**	..	..	..	..	..	..	*	†	*	*			
2	2	**Epicydes**	..	..	*	..	..	*	*						
3	3	**Sphragidophorus**	..	..	*	..	..	*	..	..	*	†			
1	1	**Meniscophorus**	..	..	..	..	..	..	..	..	*	*			
5	4	Colparthrum	..	..	*	..	†	*	*	*	*	*			
1	1	**Othryades**	..	..	..	..	..	..	..	..	*				
1	1	**Rhosaces**	..	..	..	..	..	..	..	..	*				
2	1	Stilpnonotus	..	..	*	..	..	..	*	..	..	*			
107	97														

† Not yet recorded.

Geographical Distribution (con.).

Total number of species.	New species described.		America north of Mexico.	Central America. North Mexico.	Central America. Central and S. Mexico.	Central America. Yucatan.	Central America. B. Honduras.	Central America. Guatemala.	Central America. Nicaragua.	Central America. Costa Rica.	Central America. Panama.	Tropical S. America.	Andean and extra-tropical S. Am.	Antilles.	
		MELANDRYIDÆ.													
3	2	Eustrophus	*	*	*	..	..	*	..	..	*	*	..	..	Also Europe, Tropical Africa, and Japan.
5	4	**Eustrophopsis**	..	..	*	..	†	*	*	†	*	*			
1	1	Orchesia	*	..	..	..	..	*	..	..	..	..	*	..	Also Europe, Asia, and Australia.
1	1	Microscapha	*	..	*	..	..	*							
1	1	**Cuphosis**	..	..	*	..	..	*	*	..	*	*			
4	3	Dircæa	*	..	*	..	..	*	*	..	*	*	..	..	Also Europe and Japan.
1	1	Anisoxya	*	..	*	..	..	..	..	..	..	..	..	..	Also Europe.
1	1	**Xeuxes**	..	*											
1	1	**Drances**	..	..	*										
7	7	Symphora	*	..	*	..	..	*	..	..	*				
4	4	Canifa	*	..	*	..	..	*	..	..	*	..	..	..	? Exclusively American.
5	5	**Evalces**	..	..	*	..	..	*	..	..	*				
2	2	Osphya	*	..	..	..	..	*	..	..	..	..	..	..	Also Europe.
1	1	Mycterus	*	*	..	..	..	..	..	..	..	..	..	..	Also Europe and North Africa.
1	—	Ischyomius	..	..	..	..	..	..	..	..	*	*			
1	—	Polypria	..	..	*	..	*	*	*						
3	3	**Conomorphus**	..	..	..	..	..	*	..	..	*	*			
1	1	**Cleodæus**	..	..	..	..	..	..	..	..	*				
1	1	**Physcius**	..	..	*	..	..	..	..	..	*				
1	1	**Thisias**	..	..	*	..	..	*	..	..	*				
45	40														
		PYTHIDÆ.													
1	—	Lecontia (Crymodes, *Lec.*)	*	*	..	..	..	..	..	..	..	..	..	..	Boreal America.
2	2	**Spithobates**	..	..	*	..	..	*	..	..	*				
1	1	**Sosthenes**	..	..	..	..	..	*							
1	1	Salpingus	*	..	..	..	..	*	..	..	..	..	*	..	Also Europe, Madeira, &c.
2	2	**Lanthanus**	..	..	*	..	*	*	..	..	*				
7	6														
		ŒDEMERIDÆ.													
4	4	Calopus	*	..	*	..	..	*	..	..	..	..	..	..	Also Europe.
8	8	Microtonus	*	..	*	..	..	*	..	..	..	..	..	..	Also Japan.
1	—	[Nacerdes]	*	..	..	*	..	..	..	*	..	..	..	..	Europe, &c. Introduced with timber into N. & Central America, S. Africa, Canary Is., and other places.
13	12														

† Not yet recorded.

Geographical Distribution (con.).

Total number of species.	New species described.		America north of Mexico.	Central America. North Mexico.	Central America. Central and S. Mexico.	Central America. Yucatan.	Central America. B. Honduras.	Central America. Guatemala.	Central America. Nicaragua.	Central America. Costa Rica.	Central America. Panama.	Tropical S. America.	Andean and extra-tropical S. Am.	Antilles.	
13	12	ŒDEMERIDÆ (*con.*).													
6	6	Ditylus	*	..	*	..	..	*	..	..	..	..	..	..	Also Europe, Canary Is., &c.
6	6	Diplectrus	..	..	*	..	..	*	*	*	*	*			
2	2	**Diplectroides**	..	..	*	..	..	*							
3	3	**Vasaces**	..	..	*	..	..	*							
21	21	**Sisenes**	..	..	*	..	†	*	*	†	*	*			
1	1	**Vodomarus**	..	..	*	..	..	*	..	..	*				
8	8	Copidita	*	..	*	..	..	*	*	..	*	†	..	*	Probably widely distributed.
28	23	Oxacis (? Ananca, *Fairm.*)	*	*	*	†	*	*	*	†	*	*	*	*	Widely distributed, occurring also in many Oceanic islands. Absent from Europe.
2	2	**Piras**	..	..	*	..	..	*						..	
90	84														
		XYLOPHILIDÆ.													
44	43	Xylophilus	*	..	*	..	..	*	*	..	*	*	..	..	Generally distributed, including Australia.
1	1	**Cnopus**	..	..	*										
45	44														
		ANTHICIDÆ.													
5	5	Eurygenius	*	*	*	..	..	*	..	..	..	*			
1	1	Bactrocerus	*	..	..	..	..	*							
11	11	Macratria	*	*	*	†	†	*	*	*	*	*	..	*	Generally distributed, including Australia. Absent from Europe.
16	14	Notoxus	*	*	*	†	*	*	*	†	*	*	..	*	Generally distributed, including Australia.
1	1	Mecynotarsus	*	..	..	..	..	*	..	..	..	..	..	..	Widely distributed, including Australia. Chiefly maritime. Not recorded from S. America or Antilles.
7	7	Tomoderus	*	..	*	..	..	*	*	..	*	*	..	..	Generally distributed, including Australia.
1	1	Formicomus	*	..	*	..	..	*	..	..	..	*	*	..	Generally distributed, including Australia. Very few species in America.
51	29	Anthicus	*	*	*	*	*	*	*	†	*	*	*	*	Universal.
93	69														

† Not yet recorded.

Geographical Distribution (con.).

Total number of species.	New species described.		America north of Mexico.	Central America. North Mexico.	Central America. Central and S. Mexico.	Central America. Yucatan.	Central America. B. Honduras.	Central America. Guatemala.	Central America. Nicaragua.	Central America. Costa Rica.	Central America. Panama.	Tropical S. America.	Andean and extra-tropical S. Am.	Antilles.	
		MORDELLIDÆ.													
1	1	Diclidia	*	..	..	..	..	*							
10	10	Pentaria	*	*	*	†	†	*	*	†	*	..	..	..	Also the warmer parts of Europe, &c.
4	4	Naucles	..	..	*	..	..	*	..	..	*				
1	—	Anaspis	*	*	..	..	..	..	..	..	..	..	..	..	Palæarctic region generally. In America just enters Northern Mexico.
1	1	Cothurus	..	..	*										
4	4	Tomoxia	*	..	*	*	..	..	*	..	*	*	..	..	Also Europe, Australia, &c.
1	—	Glipa	*	..	*	..	..	..	*	..	..	*	..	..	Also Tropical Asia.
58	53	Mordella	*	*	*	†	*	*	*	*	*	*	*	..	Universal. Chiefly tropical regions.
1	—	Glipodes	*	..	*	..	*	*	..	..	*				
1	1	Conalia	..	..	*	..	..	..	*	..	..	..	..	..	Also Europe.
1	1	Calyce	..	..	..	..	..	..	..	..	*	*			
75	72	Mordellistena	*	*	*	†	†	*	*	†	*	*	*	..	Universal. Chiefly temperate regions.
158	147														
		RHIPIDOPHORIDÆ.													
4	3	Pelecotomoides	..	..	*	..	..	..	*	..	*	*	..	..	Chiefly Tropical S. America and Australia.
10	2	Emenadia	*	*	*	*	†	*	*	*	*	*	*	*	Generally distributed, including Australia.
7	6	Rhipidophorus (Myodites)	*	*	*	..	..	*	..	..	..	..	..	..	Widely distributed, except S. America and Australia.
21	11														
		MELOIDÆ.													
4	2	Meloe	*	*	*	†	†	*	*	*	..	..	..	*	Widely distributed, except S. America and Australia.
3	—	Henous	*	*	*	..	..	..	..	..	..	..	..	..	? Exclusively American.
1	—	Cysteodemus	*	*											
2	—	Megetra	*	*											
1	—	Leonia	..	..	*										
2	1	Horia	*	†	*	†	†	*	*	*	*	*	..	*	Also tropics of Asia and Africa.
13	4	Nemognatha	*	*	*	*	†	*	*	*	*	*	*	*	Widely distributed, except Australia.
3	—	Gnathium	*	*	*										
10	4	Zonitis	*	†	*	†	†	*	*	†	*	†	..	..	Generally distributed, including Australia.
39	11														

† Not yet recorded.

Geographical Distribution (con.).

Total number of species.	New species described.		America north of Mexico.	Central America. North Mexico.	Central America. Central and S. Mexico.	Central America. Yucatan.	Central America. B. Honduras.	Central America. Guatemala.	Central America. Nicaragua.	Central America. Costa Rica.	Central America. Panama.	Tropical S. America.	Andean and extra-tropical S. Am.	Antilles.	
39	11	MELOIDÆ (*con.*).													
13	—	Tetraonyx	*	*	*	†	*	*	*	†	*	*	*	*	Exclusively American, chiefly tropical.
1	—	Eupompha	*	*											
2	1	Calospasta	*	*	*										
15	4	Macrobasis	*	*	*	..	..	*	*	*	..	*	..	..	Chiefly Mexico and temperate North America.
1	—	Gnathospasta	*	..	*										
49	13	Epicauta	*	*	*	*	*	*	*	*	*	*	*	*	Generally distributed. In America, chiefly Mexico and temperate regions northwards.
15	3	Pyrota	*	*	*	†	†	*	*	*	*	*	..	..	Chiefly Mexico and temperate regions northwards. ? Exclusively American.
25	6	Cantharis	*	*	*	†	†	*	†	*	*	*	*	..	Generally distributed. In America, chiefly Mexico and temperate regions northwards.
160	38														

† Not yet recorded.

The Tenebrionidæ, by far the most extensive of all the families of the series, include an immense number of species from all parts of the World ‡. The total number of species enumerated from within our limits is 870, belonging to 145 genera, of which 49 genera and 594 species are described as new; of the 145 genera, five are introduced and three have probably been recorded by mistake. The three subfamilies, the Tentyriinæ (134 species—108 new), the Asidinæ (93 species—64 new), and the Tenebrioninæ (643 species—422 new), are represented by six, four, and twenty-one "groups" respectively. The 'Epitragides,' the most numerous in species of the six "groups" of the Tentyriinæ, are exclusively American, and the largest and finest of the known species, some of which exhibit a very remarkable form of the thorax in the

‡ In Gemminger and Harold's 'Catalogue' 4519 species are given for the united families Tenebrionidæ and Cistelidæ

female sex only, are peculiar to Mexico and the adjacent country to the northward; fifty-three species, belonging to three genera, inhabit Central America. The 'Zopherides' have their head-quarters in Central America, and the genera *Zopherus* and *Nosoderma* are amongst the most characteristic Heteromera of the region—*Zopherus*, with fourteen species, ranging a little north and also a little south of our limits; *Nosoderma*, with sixteen species, though more widely distributed, not extending north of Mexico, being replaced there by the allied genera *Noserus*, *Phlœodes*, and *Phellopsis*. The 'Tentyriides,' so numerous in genera and species in the Palæarctic Region, contain comparatively few representatives in the New World, and the majority of the Central American species belong to one genus, *Emmenastus*. The other three groups, the 'Epiphysides,' the 'Stenosides,' and the 'Dacoderides,' furnish only one, three, and one species respectively, all from Northern or Western Mexico. The subfamily Asidinæ includes four "groups," three of which are not represented south of Mexico; the other group, the 'Nycteliides,' is more widely distributed, being especially numerous in Chili, and three genera (two of which form the 'Branchini' of Leconte and Horn) of somewhat uncertain affinities are referred to it—*Branchus* with two species, and *Anectus* and *Oxinthas* with one each *. The 'Asidides,' 'Cryptoglossides,' and 'Coniontides' are characteristic of the arid regions of the Southern and South-western United States and of the elevated plateau of Mexico, the genus *Asida* possessing fifty-five species in Mexico alone; *Coniontis*, with many species in California &c., is unknown as yet from within our limits, where it appears to be replaced by *Eusattus*, ten species of which occur in Mexico. The subfamily Tenebrioninæ includes a multitude of species, and twenty-one of its main "groups" are represented in Central America; six of these "groups," the 'Eutelides,' 'Phrenapatides,' 'Goniaderides,' 'Cnodalonides,' 'Misolampides,' and 'Amarygmides,' all containing forest species, do not extend north of Mexico; North America, however, has two groups, the 'Amphidorides' and the 'Meracanthides,' which are absent from the Central American fauna. The species of seven of the "groups" of the Tenebrioninæ live upon the ground, those of all the other "groups" being found on trees or herbage, or under bark, in rotten wood, or in fungi attached thereto. The number of Central American species of the subfamily amounts to 643, belonging to 115 genera, 40 genera and 422 species being described as new. Of the various "groups," the 'Blaptides,' represented within our limits by two exclusively Central and North-American genera—*Elœodes* with sixty, and *Embaphion* with one, species in Mexico,—are characteristic

* *Psectrascelis* has been incorrectly recorded by Solier as from Mexico.

of the plateau of Mexico and the adjacent country to the northward, *Elæodes* extending as far north as Hudson's Bay and southwards to the Los Altos region of Guatemala, where a single species occurs. The 'Scaurides,' with one genus, *Argoporis*, the American representative of the well-known European genus *Scaurus*, of similar habits to the Blaptides, include ten species, most of which are confined to Northern Mexico. The 'Pedinides' are chiefly represented by one genus, *Blapstinus*, numerous in species (27) in Central America, as well as in other parts of America, north and south. The 'Opatrides' have only one typical genus in Central America, and that one of the most minute forms known, viz. *Cnemeplatia*, a genus also occurring in Europe, North Africa, Madeira, and North America. The 'Helopides' are represented by a large number of species, especially in Mexico and Guatemala, belonging to the three genera *Nautes* (20), *Tarpela* (51), and *Helops* (18); the majority of them are much more brightly coloured than those inhabiting more northern regions, and the species of *Nautes* and *Tarpela* (with one or two exceptions) are fully winged. The 'Trachyscelides,' 'Crypticides,' and 'Apocryphides' include but few species, all of which live on the ground; amongst the Trachyscelides is the familiar genus *Phaleria*, which is represented on the Atlantic and Pacific coasts, one species being common to both. The 'Misolampides' include various conspicuous genera, all confined to the forest-region, one of which, *Hegemona*, with no less than eighteen species, is characteristic of the Central-American fauna. The 'Tenebrionides,' 'Ulomides,' 'Diaperides,' 'Cnodalonides,' and 'Strongyliides' are all rich in species in the forest-region, more especially in the "tierra caliente": the most characteristic genera are *Nyctobates*—the giants of the family,—*Zophobas*, and *Nuptis* (Tenebrionides); *Ulosonia*, *Uloma*, *Sitophagus*, and *Doliema* (Ulomides); *Platydema*—exceedingly numerous in species,—*Liodema*, and *Hapsida* (Diaperides); *Acropteron* and *Cyrtosoma* (Cnodalonides); *Cuphotes* (=*Spheniscus*), *Pœcilesthus*, and *Strongylium*—the last-mentioned with no fewer than sixty-nine species (Strongyliides). The 'Phrenapatides' include the Passaliform-genus *Phrenapates*, peculiar to Central America and the northern part of South America, and a few small allied forms, all of tropical distribution. The 'Amarygmides,' with a single American genus, *Pyanisia*, are represented by a few species, all found in or about fungi on rotten wood, usually in gloomy places in the forest. The remaining "groups," the 'Bolitophagides,' 'Goniaderides,' 'Heterotarsides,' and 'Talanides,' require no special comment. Of the entire family Tenebrionidæ, the most characteristic genera of the Mexican and Central-American fauna, are:—of those living upon the ground, *Asida* (Mexico only), *Elæodes* (Mexico and Guatemala only), *Eusattus* and *Argoporis* (Mexico only), and *Blapstinus*; of those living upon trees or herbage, *Zopherus*, *Noso-*

derma, *Emmenastus* (excluding the apterous species), *Nyctobates*, *Nuptis*, *Phrenapates*, *Platydema*, *Hapsida*, *Hegemona*, *Isaminas*, *Saziches*, *Oxidates* (Mexico only), *Nautes*, *Tarpela*, *Talanus*, *Paratenetus*, *Acropteron*, *Pyanisia*, and *Strongylium*. *Zopherus*, *Nosoderma*, *Hegemona*, and *Oxidates*, all numerous in species, have their head-quarters within our limits. The genera with the largest number of representatives are:—*Strongylium* (69), *Elæodes* (60—all but one restricted to Mexico or north thereof), *Asida* (55—none of which occur south of the Isthmus of Tehuantepec), *Tarpela* (51), *Platydema* (48), *Epitragus* (37), *Emmenastus* (29), and *Blapstinus* (27). Forty-one genera are known only as yet from within the limits of Central America, but a number of these are scarcely likely to be endemic: of those that are almost certain to extend into the northern part of South America, the following may be mentioned:—*Œatus*, *Isicerdes*, *Daochus*, *Arrhabœus*, *Mophon*, *Mœon*, and *Mentes*. Seventeen genera (mostly monotypic) are peculiar to Mexico, one to Honduras, two to Guatemala, one to Nicaragua, two to Costa Rica, and three to the State of Panama. Of the seventeen Mexican genera, only three or four, at most, are likely to extend into the United States, and as they have not been found in Guatemala or southwards, it is almost certain that the majority of them are really endemic; two of these, *Oxidates* and *Mitys*, each contain several species of large size. Twenty-seven genera are common to North, Central, and South America, twenty-eight to North and Central America (chiefly Mexico), and forty-two to Central and South America. One genus, *Ennebœus* (group Diaperides), has a most remarkable geographical distribution, viz.:—Central America, Colombia, and Tasmania, with two, one, and one species respectively, all very closely allied: the only parallel case in the Heteromera known to me being *Pelecotomoides* (Rhipidophoridæ), closely allied species of which inhabit Tropical America and Australia.

The family Cistelidæ, which may be described as degraded Tenebrionidæ with pectinate tarsal claws, is very numerous in species in Mexico and Guatemala, but diminishes in numbers southward. From within our limits 158 species are enumerated, belonging to twenty-four genera, of which no fewer than fifteen genera and 150 species are described as new. This is one of the 'neglected' families of Heteromerous Coleoptera, and up to the date of publication of this work not a single species had been recorded from within our limits. No attempt had hitherto been made to deal with the Cistelid-fauna of any region, except that of Europe and of North America, and a large number of new generic names were required for the Central-American species. The Cistelidæ, as a whole, are more numerous in temperate than in tropical

regions, being especially well represented in Europe, North America, South Africa, and Australia. *Prostenus*, *Xystropus*, *Lystronychus*, *Cteisa*, and *Lobopoda* are characteristic of the tropical regions of America—and all are represented in the Central-American fauna, the last-mentioned by forty-six species; and *Hymenorus* and *Cistela* of the more northern portion of the American continent. Twelve genera are known only as yet from within the limits of Central America, seven of which are peculiar to Mexico, two to Guatemala, and one to the State of Panama. It is probable, therefore, that Mexico contains at least four or five endemic genera of this family. Of the new genera described, *Diopœnus*, *Æanes*, *Phedius*, and *Erxias* are the most interesting; *Phedius*, with nine representatives in Mexico, is apterous or nearly so, and its species live beneath stones on the ground. The males of the *Lobopodæ* have the genitalia highly chitinized and complex, and these organs afford excellent corroborative specific characters, as will be seen from our Plates XVII. and XVIII. *Hymenorus* is one of the most perplexing genera of the family, its species being very numerous and closely allied.

The family Othniidæ is limited to a single genus, *Othnius* (=*Elacatis*, Pascoe); six species occur in Central America, of which five are described as new. The genus is a very widely-distributed one, occurring in Borneo, New Guinea, Ceylon, Japan, and North and Central America, but with no known representative as yet from the South American continent. Its species are of active, predatory habits, and they are usually found running on the bark of fallen trees in search of food.

The family Nilionidæ, in its true sense limited to the one genus *Nilio*, is confined to Tropical America. It contains numerous species in South America, but has only four representatives—three of which are described as new—within our limits, where it ranges as far north as the Mexican State of Vera Cruz. Its species greatly resemble various Endomychidæ and Coccinellidæ; they are found about fungoid growth on trees and are very sluggish in their movements.

The family Monommidæ, formerly placed in the Serricornia between the Throscidæ and the Eucnemidæ, is remarkable from the compact form of the exoskeleton of its various species, resembling in this respect the Throscidæ and the Histeridæ. Three genera only are known as yet—one, *Monomma*, confined to the warmer parts of the Old World; the other two, *Hyporhagus* and *Aspathines*, exclusively American, *Aspathines*

being characterized as new in this work. Of the twelve species occurring in Central America, eleven belong to *Hyporhagus* (six new) and one to *Aspathines* (also new). Both *Aspathines* and *Hyporhagus* are represented in the Antilles.

The family Lagriidæ, with which we commence our second volume, is a very extensive one, represented in almost all parts of the World. It has this peculiarity, that all the American genera appear to be endemic. *Lagria*, the typical genus of the Lagriidæ, is distributed over the greater part of the Old World, not only in the temperate but in the tropical regions also, and it extends to Australia and Tasmania; yet it is altogether absent from the American continent, where it is replaced by *Statira*, the largest genus of the family, and one of the most characteristic of the American genera of Heteromera. The Central-American Lagriidæ greatly resemble those of Tropical South America, and of the new genera described, *Epicydes* only is likely to be endemic. The number of species here enumerated from within our limits is 107, belonging to nine genera, of which six genera and ninety-seven species are described as new. The majority of the species belong to *Statira*, which contains hundreds of representatives in Tropical South America and extends northward into the United States, where a few species occur; no fewer than eighty-three inhabit Central America, of which seventy-five are described as new. The other genera contain but few species, one only, *Uroplatopsis*, calling for special comment. The different species of Lagriidæ are found upon herbage, and they are most abundant in the forest region.

The family Melandryidæ, with which the 'Scraptiides' and the 'Mycterides' are here merged, contains but a limited number of representatives within our limits. The various genera belonging to it are essentially wood-feeders, yet, notwithstanding the immense amount of forest, they are conspicuous by their absence. The Melandryidæ, however, are, no doubt, chiefly confined to the temperate regions of the globe, north and south; they are everywhere scarce within the tropics, where they seem to be replaced by the group 'Diaperides' of the Tenebrionidæ. From within our limits forty-five species only are enumerated, belonging to twenty genera, and nine genera and forty species are described as new. The group 'Melandryides' is chiefly represented by the genera *Eustrophus*, *Eustrophopsis*, *Dircæa*, *Cuphosis*, *Orchesia*, and *Symphora*; of these, three genera, *Eustrophus*, *Dircæa*, and *Orchesia*, are of wide distribution. The group 'Scraptiides,' consisting of very fragile insects of small size, is widely distributed, species even occurring in Tasmania and New Zealand; the largest known species

of the group inhabits Central America. The groups 'Ischyomiides,' 'Osphyides,' and 'Mycterides' are represented by one, two, and one species respectively; the two last-mentioned groups belong to a northern type. Many of the genera of this family are very widely distributed, as *Eustrophus*, *Orchesia*, *Dircæa*, *Anisoxya*, *Osphya*, and *Mycterus*; nine, however, are described as new, of which two are from Mexico, and one from the State of Panama, the others being of more general distribution within our limits, two occurring also in South America. It is probable that several of them are really endemic. Three genera are common to North, Central, and South America, six to North and Central America, and six to Central and South America.

The family Pythidæ has a similar distribution to the Melandryidæ, but it contains a very limited number of species. Seven only, belonging to five genera, have as yet been discovered in Central America; of these, three genera and six species are described as new. *Lecontia* (=*Crymodes*, Lec.) is the largest member of the family occurring within our limits; it is a well-known insect of the boreal region of North America, extending southward into N.W. Mexico. The other species are of small size, one belonging to the widely distributed genus *Salpingus*. Of the three genera described as new, one only, *Sosthenes*, is likely to be endemic. All are found under the bark of trees.

The family Œdemeridæ is of considerable extent, and some of its species inhabit mangrove-swamps or the sea-shore, where they are found about rotten stumps, piles, &c. The Œdemeridæ is perhaps the most widely distributed of all the families of Heteromera, it being represented in many oceanic islands, as well as in continental lands. Like the Cistelidæ, this is a "neglected" family, as regards the exotic species, and up to the date of the commencement of the publication of this work not a single representative had been described from within our limits. Ninety species, belonging to twelve genera, are enumerated, of which five genera and eighty-four species are described as new. Three of the genera (one introduced) are also European, and one is certainly represented in various other parts of the World. *Oxacis*, *Sisenes*, *Copidita*, *Ditylus*, *Diplectrus*, and *Microtonus* are the principal genera occurring in Central America—*Oxacis* and *Sisenes* each with upwards of twenty species; *Oxacis* and *Copidita* have representatives in the Antilles. The four (new) genera known only as yet from Central America are hardly likely to prove endemic.

The family Xylophilidæ is probably very widely distributed, at least on continental

lands, but, owing to the minute size and fragility of its species, very few have been described, beyond those of Europe, Japan, Ceylon, and N. America; the genus *Xylophilus*, however, is represented in South America, as well as in Australia. Forty-five species are here recorded from Central America, all belonging to *Xylophilus* (in its wide sense) except one, the latter forming the type of a new genus; forty-four of these are described as new. These insects chiefly inhabit the oak-woods of the highlands of Mexico and Guatemala, and they are characteristic of the fauna of that region, becoming fewer in number southward; they live upon the leaves and branches of the oaks, especially on those with large leaves. Notwithstanding their minute size, they are amongst the most interesting of the Central-American Heteromera.

The family Anthicidæ is of world-wide distribution, and it contains an immense number of species. From within our limits ninety-three species, belonging to eight genera, are enumerated, and of the species sixty-nine are described as new. The group 'Pedilides' (from which *Scraptia* and *Xylophilus* are here excluded) includes seventeen species, the genera *Eurygenius* and *Bactrocerus* containing some of comparatively large size; *Macratria*, represented by eleven species, is very widely distributed. The group 'Anthicides' furnishes seventy-six species, belonging to the familiar and almost universally distributed genera *Notoxus*, *Mecynotarsus*, *Tomoderus*, *Formicomus*, and *Anthicus*—*Notoxus*, *Tomoderus*, and *Anthicus* with sixteen, seven, and fifty-one species respectively, the other two with one each. A considerable number of the Central-American species were described by La Ferté in his Monograph of the Family. Four of the N.-American genera, *Stereopalpus*, *Tanarthrus*, *Nematoplus*, and *Pedilus* (*Corphyra*), the last-mentioned with a large number of species in North America and one or two in Europe, are absent from the Central-American fauna. Six genera are common to North, Central, and South America, and two to North and Central America.

The family Mordellidæ is of great extent, but the genera belonging to it are few in number, the bulk of the species belonging to *Mordella* and *Mordellistena*, both widely distributed, the former being especially numerous in Tropical America and Australia, the latter in more temperate regions. From within our limits 158 species of Mordellidæ are enumerated, sixteen belonging to the group 'Anaspides,' and 142 to the group 'Mordellides;' three genera and 147 species are described as new. The 'Anaspides,' with four genera, are chiefly represented by *Pentaria*, the familiar genus *Anaspis* only just entering our northern boundary. The 'Mordellides' mostly belong to *Mordella*

(58 species) and *Mordellistena* (75 species); *Tomoxia* is represented by four species, the remaining genera by one each. Two genera are known only as yet from Central America—*Naucles* (Anaspides) and *Cothurus* (Mordellides); the latter is probably peculiar to Mexico. To the list of "neglected" families, as regards the exotic species, the Mordellidæ may be added, and it will be noticed that with a few exceptions the whole of the Central-American species are described as new. Four genera are common to North, Central, and South America, four to North and Central America, and one to Central and South America. The peculiar shape of these insects makes them exceedingly difficult to examine, and for this reason, and also, perhaps, from the large number of exotic species, they have been greatly neglected by authors.

The family Rhipidophoridæ includes a few peculiar genera, three of which enter the Central-American fauna; one of these, *Rhipidophorus* (=*Myodites*, Latr.), is remarkable from having the elytra greatly abbreviated, so as to leave the wings almost entirely exposed. The total number of species recorded from within our limits is:—*Pelecotomoides*, four—three new; *Emenadia*, ten—two new; and *Rhipidophorus*, seven—six new. *Pelecotomoides* is chiefly confined to Tropical America and Australia; the other genera are of more general distribution. These insects are chiefly found upon flowers; some of them are parasitic upon Hymenoptera and Orthoptera.

The family Meloidæ is a very extensive one, and most of its species are of large size; it is too well known to require any special comment here. From within the limits of Central America 160 species are recorded, belonging to seventeen genera; and thirty-eight species are described as new. The subfamily 'Meloinæ' includes ten species, four of which belong to *Meloe*, this genus extending as far south as Costa Rica. The three other genera of this subfamily, *Henous*, *Cysteodemus*, and *Megetra*, represented by three, one, and two species respectively, appear to be peculiar to the Southern United States and Mexico. The subfamily 'Cantharinæ' includes four groups:—the 'Horniides,' with one genus (*Leonia*) and one species; the 'Horiides,' with one genus (*Horia*) and two species; the 'Nemognathides,' with three genera (*Nemognatha*, *Gnathium*, and *Zonitis*), having thirteen, three, and ten species respectively; and the 'Cantharides.' The 'Cantharides' are distributed amongst eight genera—*Tetraonyx*, thirteen species; *Eupompha*, one species; *Calospasta*, two species; *Macrobasis*, fifteen species; *Gnathospasta*, one species; *Epicauta*, forty-nine species; *Pyrota*, fifteen species; and *Cantharis* twenty-five species. *Leonia*, *Gnathium*, *Tetraonyx*, *Eupompha*, *Calospasta*, *Macrobasis*, and *Gnathospasta* are exclusively American. Numerous North-

American genera of Meloidæ are altogether absent from the Central-American fauna, the more temperate northern regions furnishing a greater diversity of generic types. The Mexican species have been twice monographed by Dr. E. Dugès, but this author appears to have been entirely unacquainted with many of the Mexican forms. One genus (*Leonia*) is known only as yet from Mexico; this, however, is a very close ally of the North-American *Hornia*. Seven genera are common to North, Central, and South America, and eight to North and Central America.

From the foregoing summary it will be seen—(1) that the Mexican and Central-American Heteromerous fauna, except as regards those genera containing apterous species living upon the ground (*Asida*, *Elæodes*, *Argoporis*, &c.) and some winged Cistelidæ (*Hymenorus* &c.), has little to do with that of temperate North America; (2) that a considerable number of genera are endemic in Mexico; (3) that the fauna of Central America south of Mexico partakes largely of that of Tropical South America. These conclusions nearly coincide with Mr. Bates's remarks, 'Biologia Centrali-Americana,' Coleoptera, V. p. v, on the geographical distribution of the Longicornia of the same region. To further illustrate the distribution of the Heteromerous genera known only as yet from within the limits of Mexico and Central America, the following 'Table' is added:—

	Mexico.	British Honduras.	Guatemala &c.	Nicaragua.	Costa Rica.	Panama.	Of wider distribution in Central America.	Total.
Tenebrionidæ	17	1	2	1	2	3	15	41
Cistelidæ	7	....	2	....	....	1	3	13
Othniidæ	....	....	....	....	....	....	....	....
Nilionidæ	....	....	....	....	....	....	....	....
Monommidæ	....	....	....	....	....	....	....	....
Lagriidæ	....	....	....	....	....	2	1	3
Melandryidæ	2	....	....	....	....	1	4	7
Pythidæ	....	....	1	....	....	....	2	3
Œdemeridæ	....	....	....	....	....	....	4	4
Xylophilidæ	1	....	....	....	....	....	....	1
Anthicidæ	....	....	....	....	....	....	....	....
Mordellidæ	1	....	....	....	....	....	1	2
Rhipidophoridæ	....	....	....	....	....	....	....	....
Meloidæ	1	....	....	....	....	....	....	1
	29	1	5	1	2	7	30	75

The material examined consists chiefly of the extensive Mexican collections of M. A. Sallé and Herr Höge, and the large number of specimens obtained by myself

during a four years' residence in Guatemala and the Colombian State of Panama. Smaller collections have been made by Messrs. Forrer, Buchan-Hepburn, and Becker in Northern Mexico, by Mr. and Mrs. H. H. Smith in the Mexican States of Guerrero, Vera Cruz, and Tabasco, by Mr. Gaumer in Yucatan, by Mr. J. Flohr in various parts of Mexico, by Mr. Conradt in Guatemala, by Messrs. Belt and Janson in Nicaragua, by Messrs. Rogers and Van Patten in Costa Rica, and by Herr E. Trötsch in the State of Panama: all these contributing more or less to our knowledge of the fauna under investigation. As regards the Mexican species, we are particularly indebted to Mr. Flohr, who, from time to time, up to the moment of going to press, has sent us specimens of all the more interesting Mexican Heteromera he has been able to obtain.

I may here state that the collection of Mr. F. Bates, by far the best collection of Heteromera in existence, has been of the greatest assistance to me throughout, it being especially rich in American forms. Dr. Horn, ever ready to help, has been kind enough to communicate authentically named examples of very many North-American species for comparison, and also to send us specimens of various North-Mexican forms; and in concluding these remarks I have to tender him my grateful acknowledgments.

G. C. C.

March 1893.

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* *Asida dissimilis* on the Plate.

† *Asida marginicollis* on the Plate.

‡ *Zamolxis dilatatus* on the Plate

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* *Elæodes maura* on the Plate.

† *Argoporis bicolor* on the Plate.

‡ *Pyres metallicus* on the Plate.

§ *Choaspes purpureus* on the Plate.

‖ *Blapstinus interstitialis* on the Plate.

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* *Sitophagus* (?) *cynæoides* on the Plate.

† *Platydema unicolor* on the Plate.

‡ *Scaptes squamulatus* on the Plate.

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* *Xystropus fulgidus* on the Plate.

ERRATA ET CORRIGENDA.

Page	Line	
37	14	*after* **atratus** *insert* (Tab. I. fig. 12.)
37	37	*after* **singularis** *insert* (Tab. I. fig. 13.)
71	4	*dele the words* scutellum broad, triangular.
71	24	*for* Ticomavaca *read* Tecomavaca.
83	24, 35	*for* ♀ *read* ♂.
91	28	*for* ii. *read* iii., *and for* 1830 *read* 1834.
92	22	*for* ii. *read* iii.
93	7	*for* Rinconado *read* Rinconada.
93	13	*for* Tempico *read* Tampico.
103	37	for *Klingenhöffer* read *Klingelhöffer.*
108	1	for *Derilis* read *Deriles.*
150	28	*for* includes *read* include.
158	23	*for* This is the smallest *read* This is one of the smallest.
184	26	*before* Horn *insert Platydema excavatum.*
194	5	*for* rather coarsely *read* very finely.
222	3	*for* Matamoras *read* Matamoros.
239	40	*for* 2 *read* 3.
334	36	*before* Lac. *insert Spheniscus cinctus.*
361	35	for *höfpneri* read *höpfneri.*
424	1	*for* figg. 15, ♂ *read* figg. 16, ♂.
458	33	*for* MEXICO *read* GUATEMALA.
496	18	*for* **Asida dispar** (p. 59) *read* 20. **Asida dispar.**
511	7	for *obsoletus* read *obliteratus.*
522	5	*for* Karsch *read* Kirsch.
543	27	for *interstitialis* read *punctatissimus.*
550	38	for *incilis* read *stabilis.*

BIOLOGIA CENTRALI-AMERICANA.

ZOOLOGIA.

Class INSECTA.

Order COLEOPTERA.

Tribe HETEROMERA.

Fam. TENEBRIONIDÆ.

Subfam. *TENTYRIINÆ.*

Under this subfamily are included those species in which the ventral segments are entirely corneous (without a coriaceous hind margin to the third and fourth), and the intermediate coxæ without trochantin. The coriaceous hind margin to the third and fourth ventral segments, though apparently of trivial importance, appears to be a good character, and the different groups may be readily separated by it. The arrangement is the same as that used by Leconte and Horn for the North-American species.

Group TENTYRIIDES.

This group will include Leconte and Horn's tribes Gnathosiini and Thinobatini, the former represented in our country by *Triorophus* and *Trientoma*, the latter by *Eurymetopon* and *Emmenastus*; and some genera of doubtful position, one or two of which will not fall satisfactorily into any of the groups, tribes, or subfamilies proposed by Lacordaire, Leconte, or Horn.

The Tentyriides are very poorly represented in Central America, the winged species of *Emmenastus* alone being at all numerous.

TRIOROPHUS.

Triorophus, Leconte, Ann. Lyc. New York, v. p. 141 (1852); Lacord. Gen. Col. v. p. 34 (1859); Horn, Revis. Ten. N. A. p. 258 (1870); Lec. & Horn, Class. Col. N. A. p. 362 (1883).

Four species from the Southern States of North America (from Arizona, Texas,

and California) constitute this genus; two of these species occur also within our boundary.

They are found beneath stones in arid districts.

A closely allied genus (*Stibia*, Horn) is also found in California.

1. Triorophus lævis.

Triorophus lævis, Lec. Ann. Lyc. New York, v. p. 141[1]; Horn, Revis. Ten. N. A. p. 259 (1870)[2]; Lac. Genera, t. 48. f. 4.

Triorophus rugiceps, Lec. loc. cit. p. 142[3].

Hab. North America[1 2 3], Tejon in California to the western base of the Rocky Mountains in Arizona.—Mexico, Northern Sonora (*Morrison*).

2. Triorophus nodiceps.

Triorophus nodiceps, Lec. Proc. Acad. Phil. vi. p. 447[1]; Horn, Rev. Ten. N. A. p. 259 (1870)[2]; Thoms. Arcana, i. t. 13. f. 7.

Hab. North America[1 2], Texas.—Mexico, Monclova in Coahuila (*Dr. Palmer*).

Two examples from Monclova agree fairly well with the description of *T. nodiceps*, except that they have the anterior angles of the thorax a little more acute and swollen.

TRIENTOMA.

Trientoma, Solier, Ann. Soc. Ent. Fr. iv. p. 256, t. 5. f. 7–10 (1835); Lac. Gen. Col. v. p. 35 (1859).

Two species of this genus are recorded from Cuba and St. Domingo; others from the West Indies, undescribed as yet, exist in collections, and we now have to add two from Mexico.

Allied genera (*Triphalus* and *Trimytis*) occur in North America.

1. Trientoma mexicana.

Ovate, smooth, dull black, opaque. Head almost impunctate, coarsely wrinkled on each side; prothorax strongly transverse, widest just before the base, slightly rounded at the sides, narrowed in front, smooth; elytra with nine rows of very indistinct almost obsolete rounded punctures, the punctures a little more distinct towards the sides, obsolete behind and towards the suture.

Length 6–7 millim.

Hab. Mexico (*coll. F. Bates*).

Two examples. Extremely close to *T. sallæi* from St. Domingo, and only differing therefrom by being a little more opaque, the sides of the thorax straighter, and the antennæ not quite so stout.

2. Trientoma rugifrons. (Tab. I. fig. 1.)

Black, shining. Head strongly trilobed in front (the middle lobe of the epistoma long and the lateral lobes swollen and prominent), coarsely and closely punctured, and strongly wrinkled longitudinally on each

side; prothorax strongly transverse, broadest at the base, feebly rounded at the sides, narrowed from the base to the obtuse front angles, closely and finely punctured; elytra rather long, a little wider than the thorax at the base, with nine rows of shallow rounded punctures distinct to the apex, the outer row almost obsolete, the interstices very finely, closely, and almost imperceptibly punctate; antennæ stout.
Length 8 millim.

Hab. Mexico (*coll. F. Bates*).

One example. Closely allied to a nondescript species from St. Domingo.

MESABATES.

Mentum transverse, subangular at the sides, narrowly emarginate in front, and closely fitting to the toothed broad side pieces of the submentum; mandibles not toothed on the upperside, bifid at the apex, prominent and clasping the projecting labrum; ligula completely hidden; maxillary palpi stout, the last joint narrowly triangular; head very broad, the central lobe of the epistoma almost truncate and slightly deflexed in front, the lateral lobes rounded, very prominent and projecting in front as far as the central lobe; eyes transversely oval, partly divided by the lateral lobes, sharply carinated within; prothorax transverse, about twice as broad as long, rounded at the sides, as wide as and fitting closely to the elytra; elytra convex, smooth, with rows of fine punctures; antennæ long and stout, second and fourth joints subequal, third half as long again as the second, fifth to tenth about equal in length, but widening outwardly, ninth and tenth almost transverse, eleventh smaller, rounded; legs rather short and stout; intercoxal process pointed in front; the tarsi with short stout, spiny, hairs beneath, not sulcate; prosternum narrow, declivous behind; epipleuræ narrowing from the shoulders, distinct almost to the apex; scutellum very small, transverse; metasternum short, impressed in the middle; middle coxal cavities closed externally.

One species from Mexico. I know of no very near ally to this; the general form is not unlike a small *Pachychila*. It may be known from its allies in the Thinobatini and Gnathosiini, Horn, by its very broad head; it is perhaps best placed in the latter group, the epistoma being trilobed.

1. **Mesabates latifrons.** (Tab. I. fig. 3.)

Oval, rather broad, dull black, rarely reddish brown. Head closely but not very finely punctured (a little more closely along the anterior margin), broadly impressed transversely in front, the vertex with two small rounded tubercles; prothorax transverse, the angles obtuse and almost rounded, narrowing from the broadest part a little before the base to the front, slightly narrowed behind, base very feebly bisinuate and almost straight, anterior margin broadly but feebly emarginate, closely and finely punctured, the disc with a short impressed line in front extending to the anterior margin; elytra as wide as the thorax at the base, the base almost straight, two and a half times as long as the thorax, slightly rounded at the sides, scarcely widening from the base, with regular rows of very fine shallow punctures distinct to the apex. Beneath slightly shining, closely and rather coarsely punctured, the ventral segments with longitudinal scratches and finer punctures.
Length 7–7½ millim.

Hab. Mexico, Tehuacan (*Höge*), Puebla (*Sallé*).

Sent in some numbers by Höge.

PESCENNIUS.

Mentum small, transverse, angular at the sides, truncate in front, fitting closely to the short triangular side pieces of the submentum; mandibles sharply toothed on the upperside, bifid at the apex; labrum almost

hidden in repose, clasped by the mandibles; ligula scarcely visible; head broad, feebly trilobed, almost rounded in front, the epistoma a little produced, rounded, and deflexed in the middle, the lateral lobes rounded and a little swollen but not prominent; prothorax very short and transverse, closely fitting to the elytra; elytra ovate, with regular rows of coarse punctures, the apices finely mucronate, villose; antennæ long, thin, third joint about half as long again as the second, fourth to eighth decreasing in length, ninth to eleventh larger and broader, the ninth and tenth triangular, the eleventh ovoid; apical joint of maxillary palpi narrowly and feebly triangular; legs short, the tarsi stout, densely clothed with short hairs beneath; metasternum short; intercoxal process pointed in front; prosternum very narrow, declivous behind, not contiguous to the mesosternum; epipleuræ rather broad at shoulders, narrowing behind and not reaching the apex; eyes almost rounded; scutellum transverse, very small; intermediate coxal cavities closed externally.

Founded upon one Mexican species. This genus is allied to *Eurymetopon*, *Trimytis*, and *Emmenastus*, though differing greatly from all of them in the structure of the antennæ, and by its hairy clothing; allied also to *Edrotes* and more distantly to *Amphidora* &c., which are similarly clothed with long hairs. The legs are comparatively short and stout. The antennæ long, with the last three joints distinctly larger.

1. **Pescennius villosus.** (Tab. I. fig. 6.)

Ovate, brown or brownish black, slightly shining, clothed with short yellowish decumbent hairs, and the elytra in addition with long erect pale yellowish hairs. Head coarsely and closely punctured, the vertex longitudinally rugulose; prothorax convex, with very coarse rounded impressions placed close together and more or less confluent, strongly transverse, feebly rounded at the sides, widest just before the base, a little narrowed anteriorly to the slightly prominent front angles, slightly impressed transversely before the almost truncated base, the anterior margin broadly but feebly emarginate; elytra a little wider than the thorax, rounded at the sides, widest about the middle, very convex, with rows of deep rounded impressions distinct to the apex, the impressions close together, the first two rows turning off obliquely towards the shoulders near the base and making room for a very short scutellar row; interstices flat, finely and sparingly punctured, humeral angles obtuse, base almost straight. Beneath reddish brown, shining, with large rounded very coarse punctures, the abdomen towards the apex more sparingly and finely punctured. Legs and antennæ red.

Length 6 millim.

Hab. Mexico, Tehuacan (*Höge*).

Found in plenty by Höge.

SŒMIAS.

Mentum rather large, transverse, slightly angular at the sides, closely fitting to the short side pieces of the submentum, very coarsely punctured; mandibles with a strong tooth on the upperside; labrum not prominent, almost hidden by the epistoma; maxillary palpi stout, short, last joint broad oval; ligula not visible; head broad, feebly trilobed in front, the central lobe of the epistoma rounded and slightly deflexed, lateral lobes rounded, not swollen or prominent; eyes large, rounded, not carinated within; prothorax transverse, convex, coarsely punctured, closely fitting to the elytra; elytra ovate, rounded at the sides, strongly convex, with scattered appressed hairs, and regular rows of coarse punctures; antennæ short, thickening a little outwardly, last joint oval, smaller than preceding; legs short and stout, tarsi stout, with short spiny hairs beneath; intercoxal process rather broad, rounded at the apex; epipleuræ distinct throughout, narrowing from the shoulders; intermediate coxal cavities closed externally; scutellum small, transverse.

One inconspicuous species from Mexico. *Sœmias* is allied to *Trimytis*, but with the

epistoma very feebly trilobed and almost rounded in front, the elytra with scattered rows of appressed hairs, the eyes not carinated within, &c; from *Emmenastus* it may be known by the shorter and stouter legs.

1. **Sœmias minuta.** (Tab. I. fig. 5.)

Oval, convex, black, shining, slightly pubescent. Head coarsely and closely punctured; prothorax transverse, convex, rounded at the sides, a little wider behind than in front, widest just before the base, angles obtuse but little prominent, base feebly bisinuate, coarsely and closely punctured, indistinctly impressed transversely behind just with the basal margin; elytra slightly wider than the thorax at the base, rounded at the sides, widest about the middle, convex, with regular rows of coarse punctures distinct to the apex, the interstices flat, almost impunctate, with scattered indistinct appressed greyish hairs. Legs and antennæ red. Beneath reddish brown, shining, with scattered rather coarse punctures.

Length 3–3½ millim.

Hab. Mexico, Cordova (*Sallé*).

Five examples.

MENCHERES.

Mentum transverse, angular at the sides, truncate in front, and closely fitting to the side pieces of submentum; mandibles sharply toothed on the upperside, truncate at apex; maxillary palpi stout, apical joint narrowly and feebly triangular; labrum not very prominent, clasped by the mandibles; ligula entirely concealed; epistoma a little produced in the middle, broadly rounded in front, the lateral lobes rounded but little swollen; prothorax transverse, closely fitting to the elytra, lateral and basal margins a little thickened and reflexed; elytra long, with regular rows of punctures and short appressed hairs; antennæ thickening a little towards the apex, third joint half as long again as the second, fourth to seventh decreasing a little in length, eighth to tenth subtriangular, eleventh narrower ovoid; legs moderate; intermediate and posterior tarsi long, basal joint of latter about equal in length to the fourth joint, all the tarsi beneath clothed with short stiff hairs and the last joint feebly sulcate; metasternum long; intercoxal process acuminate and pointed in front (*elongatus*), or narrow, shorter and rounded in front (*nicaraguensis*); prosternum narrow, declivous behind; epipleuræ distinct, narrowing from the shoulders, obsolete a little before the apex; scutellum small, transverse; eyes rounded; intermediate coxal cavities closed externally; ventral segments corneous.

One species from Guatemala and one from Nicaragua will constitute this genus. Allied to *Emmenastus*, from which it may be known by its more strongly margined thorax, trilobed front, the rows of short hairs on the elytra, &c.; also superficially resembling certain *Blapstinus* and allies. *Mencheres* might be placed in either of the groups Thinobatini or Gnathosiini. The head is feebly trilobed in front.

1. **Mencheres nicaraguensis.**

Oblong oval, reddish brown, convex, pubescent, slightly shining, apterous. Head coarsely and not very closely punctured; prothorax rather convex, somewhat coarsely and closely punctured, transverse, rounded at the sides, widest about the middle, lateral margins a little thickened and narrowly reflexed, narrowed in front to the slightly prominent obtuse front angles, very slightly narrowed behind, hind angles rectangular, base strongly bisinuate, closely fitting to the elytra, and the margin a little raised, narrowly reflexed and prominent in the middle, the disc slightly impressed transversely behind just in front of the basal margin; elytra with regular rows of rounded punctures distinct to the apex, the punctures close together and the rows more distinct outwardly [a little indistinct towards the suture], interstices flat with fine scattered punctures, and each with a row of short appressed yellowish hairs, long, convex, a little rounded at sides, a little wider than the thorax at the base, humeral angles obtuse, base bisinuate. Beneath shining, with

coarse rounded punctures, ventral segments sparingly but not very finely punctured; metasternum longitudinally impressed in the middle.

Length 8–9 millim.

Hab. NICARAGUA, Chinandega (*Sallé*), Chontales (*Belt*).

Two examples. These specimens differ slightly *inter se*: the elytra are a little more parallel in the Chinandega individual and the interstices more distinctly punctured.

2. **Mencheres elongatus.** (Tab. I. fig. 4.)

Elongate oval, convex, reddish brown, pubescent, slightly shining. Head rather convex, coarsely and sparingly punctured in front, more finely behind; prothorax rather convex (especially in front), rounded at the sides, transverse, very slightly narrowed and sinuate behind to the subacute hind angles, narrowed a little in front to the rather prominent acute anterior angles, base strongly bisinuate, slightly impressed transversely near the base just within the slightly raised margin, closely and finely punctured; elytra about three times as long as the thorax, a little wider than the thorax at the base, slightly rounded at the sides, humeral angles obtuse, with regular rows of rounded punctures (more distinct outwardly), the interstices flat with scattered fine punctures distinct towards the suture, obsolete at the sides, and each with a row of short appressed yellowish hairs. Beneath shining; ventral segments sparingly and finely punctured, the rest somewhat coarsely and sparingly punctured; metasternum faintly impressed longitudinally down the middle.

Length 9 millim.

Hab. GUATEMALA, El Jicaro in Vera Paz (*Champion*).

Two examples. Closely allied to *M. nicaraguensis*, but longer, the intercoxal process acuminate and pointed in front, the thorax a little more finely and more sparingly punctured, &c.

POSIDES.

Mentum rather large, transverse, slightly angular at the sides, feebly emarginate in front, closely fitting to the side pieces of the submentum; mandibles strongly toothed on the upperside, the tooth on the right side strong and stout, that on the left short and slightly pointed, the lower longer lobes broad and truncate at the apex; maxillary palpi stout, apical joint broad oval; labrum almost completely and mandibles in greater part hidden by the epistoma; ligula entirely concealed; head short and broad; epistoma broad, almost truncate in front, a little produced triangularly in the middle and deflexed, lateral lobes rounded, not prominent, slightly impinging on the eyes behind; eyes large, rounded, carinated within; prothorax transverse, convex, strongly margined, the front angles rather prominent, strongly bisinuate at the base, and fitting closely to the elytra, coarsely punctured; elytra convex, oblong-ovate, with regular rows of deep coarse punctures; antennæ rather long, not very stout, third joint half as long again as the second, fourth to eighth decreasing in length and oboval, ninth and eleventh broader, subtriangular, eleventh rounded; legs short, tarsi stout, densely clothed with hair beneath; intercoxal process rounded in front; epipleuræ narrow, distinct to the apex; scutellum small, transverse; intermediate coxal cavities entirely closed externally; prosternum narrow, declivous behind.

One species from Mexico. Superficially resembling somewhat the genus *Helops*.

1. **Posides dissidens.** (Tab. I. fig. 2.)

Oblong oval, very convex, dark reddish brown or black, shining, apterous. Head dull, strongly impressed transversely in front with a few scattered fine punctures; prothorax transverse, convex, impressed transversely along the base, rounded at the sides, equally narrowed in front and behind, lateral and basal margins and the slightly prominent subacute anterior angles a little raised and prominent, base strongly

bisinuate, front margin broadly but feebly emarginate, hind angles rectangular, very coarsely and closely punctured at the sides, more sparingly and finely along the middle, the spaces between the punctures very finely and sparingly punctate; elytra long, convex, rounded at the sides, widest about the middle, scarcely wider than the thorax at the base, with regular rows of very coarse rounded impressions distinct to the apex, interstices flat with scattered very fine punctures. Beneath shining, with large, very coarse, rounded impressions, the ventral segments towards the apex sparingly and finely punctured.

Length 10–11 millim.

Hab. Mexico, Puebla (*Salle*), Tehuacan (*Höge*).

Found in some numbers by Höge.

EURYMETOPON.

Eurymetopon, Eschscholtz, Zool. Atl. iv. p. 8 (1831); Lac. Gen. Col. v. p. 66 (1859); Horn, Rev. Ten. N. A. p. 267 (1870); Lec. & Horn, Class. Col. N. A. p. 353 (1883).

Cryptadius, Lec. Ann. Lyc. New York, v. p. 140 (1851).

Some half-dozen North-American species constitute this genus; we have now to record two from Mexico. The winged species of *Emmenastus* and *Eurymetopon* are stated to occur beneath bark of *Prosopis* or mesquit; those without wings under stones.

1. Eurymetopon rufipes.

Eurymetopon rufipes, Eschsch. Atlas, iv. p. 8, t. 18. f. 1 (1831)[1]; Mann. Bull. Mosc. ii. p. 264; Horn, Rev. Ten. N. A. p. 267 (1870)[2].

Eurymetopon obscurus, Lec. Ann. Lyc. New York, v. p. 138[3].

Hab. North America, Colorado desert[3], Arizona[2], California[1].—Mexico, Northern Sonora (*Morrison*).

Apparently common in Sonora.

2. Eurymetopon brevicolle. (Tab. I. fig. 7.)

Oblong ovate, brownish black, slightly shining, winged. Head dull, the vertex sparingly and finely punctured; the epistoma broad, truncate in front, separated on each side from the lateral lobes by an oblique impression, anterior margin reddish, a little more coarsely and closely punctured; prothorax strongly transverse, rounded at the sides, but little narrowed behind, widest a little behind the middle, somewhat strongly narrowed in front, the angles sharp triangular, hind angles rectangular, base slightly bisinuate and almost straight, finely and rather closely punctured, with an indistinct central raised line; elytra wider than the thorax at the base, slightly rounded at the sides, three times as long as the thorax, with indistinct rows of fine punctures, the interstices flat, with scattered very fine punctures and some slight traces of transverse wrinkles. Legs and antennæ red.

Length 8½ millim.

Hab. Mexico, San Pedro in Coahuila (*Dr. Palmer*).

One example. Allied to *E. sodale*, Horn, and the head formed as in that species, but larger, and the thorax broader behind, less rounded at the sides, less convex, and very short in proportion to the length of the elytra.

EMMENASTUS.

Emmenastus, Motschulsky, Bull. Mosc. i. p. 75 (1845); Lac. Gen. Col. v. p. 59 (1859); Lec. Class. Col. N. A. p. 214 (1862); Horn, Rev. Ten. N. A. p. 268 (1870); Lec. & Horn, Class. Col. N. A. p. 362 (1883).

Eurymetopon, Eschsch., Lec. Ann. Lyc. New York, v. p. 138 (1852).

Hylocurus, Chev. MS.

Some nine or ten species of this genus have been described from the Southern States of North America; many others are found in Central America, but none apparently have been described from that country till now. The southern range of the genus is probably in Colombia. Some closely allied smaller forms occur in Chili. *Emmenastus*, as recognized here, will include only the New-World species; it is not unlikely that the genus will have to be divided eventually. Some of the winged species with long metasternum have the mandibles toothed above; several have the anterior margin of the thorax slightly emarginate on each side near the angles, immediately behind the eyes, thus allowing the head to be withdrawn still deeper into the thorax; while others from Guatemala, southwards, are very convex, and have a distinct deep fovea on each side of the base of the thorax. The apterous species have the base of the thorax almost straight. The head quarters of the genus will be in Central America. The winged species are very numerous, and apparently not of wide distribution; of apterous forms we only know as yet of some few Mexican species allied to those of North America. While in North America the apterous species are more numerous than those with wings, the reverse is the case in our territory.

The winged species are found by beating herbage and the leaves of fallen trees, they also frequently come to light; the others beneath stones. The different species are very closely allied and form a difficult study. Two winged species are recorded from North America, one of which (*E. longulus*, Lec.) occurs in our country, the other (*E. texanus*, Lec.) is unknown to me; besides these and those from Central America, there are in Mr. F. Bates's collection two undescribed winged species* labelled respectively as from "California" and "Pensacola;" both, I suspect, are of Mexican origin.

* *Emmenastus ellipticus.*—Of a different form from any other species of the genus known to me. The thorax and elytra taken together are of a regular elliptic, oval, convex form, equally narrowed in front and behind; reddish brown in colour, winged; the head coarsely and closely punctured; the prothorax, though broader than long, is comparatively longer than in the allied species, strongly rounded at the sides, widest behind, narrowed in front, anterior angles subacute and a little prominent, the base strongly bisinuate and the margin a little raised in the middle, sparingly and rather finely punctured on the disc, the punctuation closer and coarser at the sides, within the basal margin on each side about the middle is a short transverse impression; the elytra about the width of the thorax, convex, with regular rows of coarsish punctures, distinct to the apex, the interstices finely and rather closely punctured. Length 6 millim. One specimen in Mr. F. Bates's collection, labelled coll. Laferte, Pensacola, Mex. (*Guérin*). As far as I am aware, there is no place of this name in Mexico, though there is in Florida.

E. vicinus.—A small, convex, winged species near *E. tenebrosus* in form, but much smoother and smaller;

Sect. 1. *Winged Species.*

1. Emmenastus longulus.

Eurymetopon longulum, Lec. Ann. Lyc. New York, v. p. 138[1].
Emmenastus longulus, Horn, Rev. Ten. N. A. p. 269 (1870)[2].

Hab. North America, San Diego[1] in California[2], Arizona[2].—Mexico, Northern Sonora (*Morrison*).

2. Emmenastus chiriquensis. (Tab. I. fig. 9.)

Winged, oblong ovate, convex, reddish brown or black, shining. Head coarsely and rather closely punctured; prothorax transverse, convex, sides almost straight behind near the base, rounded and narrowed in front, hind angles rectangular, front angles slightly pointed and a little prominent, base strongly bisinuate and with a short feeble shallow oblique impression on each side and rarely a slight impression in the centre in front of the scutellum, anterior margin emarginate and sinuate on each side near the angles just behind the eyes, rather coarsely and closely punctured along the sides, more sparingly and finely in the middle; elytra with regular rows of coarse punctures distinct to the apex, the interstices with scattered fine punctures; intercoxal process long, acuminate at the apex, and passing beyond the hind coxæ; metasternum long; mandibles toothed on the upperside; legs and antennæ red.
Length 7–8 millim.

Hab. Panama, Volcan de Chiriqui, Tolé, Taboga Island (*Champion*).—Colombia, Bogotá (*coll. Bates*).

Rather common in Chiriqui at an elevation of from 2000 to 4000 feet, and found by beating herbage.

3. Emmenastus longicornis.

Winged, elongate oval, black, shining. Head with two feeble impressions between the eyes, the front rather coarsely and closely, the vertex a little more sparingly punctured; prothorax transverse, convex, rounded at the sides, a little narrower in front than behind, base strongly bisinuate, coarsely and closely and almost equally punctured, a little more sparingly punctured in the middle behind, slightly impressed transversely in front of the scutellum; elytra long, almost parallel to beyond the middle, with regular rows of coarse punctures distinct to the apex, the interstices with exceedingly fine scattered punctures; antennæ and legs dark reddish brown, the former rather long.
Length 8 millim.

Hab. Guatemala, San Gerónimo (*Champion*).

One example. Allied to *E. chiriquensis*, but narrower, the thorax more coarsely punctured and more narrowed behind, and the antennæ a little longer.

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reddish brown in colour, slightly shining; the head closely and rather coarsely punctured; prothorax convex, rounded at the sides, narrowed in front, the sides very feebly sinuate before the rather acute anterior angles, a little narrowed behind, hind angles obtuse, base bisinuate, finely and closely punctured, the punctures confluent at the sides, a small rounded impression behind in front of the scutellum; elytra convex, a little wider than the thorax at the base, with indistinct but regular rows of fine punctures to the apex; interstices finely and rather closely punctured. Length 5½ millim. One specimen in Mr. F. Bates's collection, labelled Calif. ex coll. Laferte.

4. **Emmenastus variabilis.**

Winged, oblong ovate, convex, reddish brown or black, shining. Head coarsely and closely punctured; prothorax transverse, convex, narrowed in front, rounded at the sides, sides nearly straight behind in front of the rectangular hind angles, front angles slightly acute, base strongly bisinuate, anterior margin feebly emarginate and sinuate on each side near the angles just behind the eyes, closely coarsely and almost equally punctured, the punctures a little finer and more scattered in the middle; elytra with rows of fine punctures distinct to the apex, the interstices finely and somewhat confusedly punctured; legs and antennæ red; mandibles toothed above; metasternum long.

Length 7–8½ millim.

Hab. Mexico (*coll. F. Bates*), Tuxtla, Playa Vicente (*Sallé*), Almolonga (*Höge*), Presidio (*Forrer*); Honduras (*Sallé*).

Labelled *Hylocurus dermestoides* in the Sallé collection.

A common species in Mexico, and found by Höge in plenty at Almolonga. Some individuals are more coarsely and closely punctured than others; one from Presidio has the rows of punctures on the elytra much finer. Apparently a variable species, it may be known from *E. chiriquensis* by its more evenly punctured thorax, and its finer and less regular rows of elytral punctures.

5. **Emmenastus canaliculatus.** (Tab. I. fig. 10.)

Winged, oblong ovate, not very convex, reddish brown or black. Head rather coarsely and closely punctured; prothorax comparatively short, transverse, not very convex, narrowing from the base to the front, widest at base, hind angles rectangular, front angles scarcely pointed and almost obtuse, base bisinuate, sides slightly rounded, closely and somewhat coarsely and evenly punctured, the punctures a little more scattered in the middle, with a short smooth impressed line in the middle at the base; elytra a little wider than the thorax at the base, with rows of fine punctures distinct to the apex, the interstices with finer scattered punctures, the punctures a little more distinct at the margins and at the apex; legs and antennæ red. Beneath rather closely punctured.

Length 8–9 millim.

Hab. Mexico, Presidio (*Forrer*).

Four examples. This species may be known from its allies by its less convex form, and its comparatively short (and feebly canaliculated) thorax.

6. **Emmenastus brevipennis.**

Winged, oblong ovate, rather broad, not very convex, black, shining. Head coarsely and closely punctured; prothorax transverse, not very convex, widest just before the base, slightly rounded at the sides, but little narrowed behind, narrowed in front to the scarcely prominent obtuse angles, hind angles obtuse, base bisinuate, closely coarsely and almost equally punctured, the punctures a little confluent towards the sides; elytra a little wider than the thorax, not very convex, comparatively short, with rows of rather coarse punctures distinct to the apex, the interstices with scattered fine punctures; legs and antennæ reddish brown; intercoxal process rounded in front.

Length 7 millim.

Hab. Mexico, San Blas (*Forrer*).

One example. This species may be known from *E. variabilis* and allies by its shorter form. The elytra are comparatively very short.

7. Emmenastus solitarius.

Winged, oblong ovate, convex, reddish brown, shining. Head coarsely and rather closely punctured; prothorax transverse, convex, rounded at the sides, widest just before the base, scarcely narrowed behind, hind angles subrectangular, narrowed in front to the rather sharp front angles, anterior margin feebly emarginate and sinuate on each side near the angles just behind the eyes, base bisinuate, coarsely closely and subequally punctured, the punctures a little confluent at the sides; elytra a little wider than the thorax at the base, convex, with rows of coarsish punctures distinct to the apex, the interstices coarsely punctured, the rows of punctures a little indistinct towards the suture, distinct at the sides; mandibles toothed above; intercoxal process pointed in front.

Long. 7½ millim.

Hab. Mexico, Tepanistlahuaca (*Sallé*).

One example. This species may be known by its rather coarse uniform punctuation. The punctures of the interstices of the elytra but little finer than those of the striæ.

8. Emmenastus belti.

Winged, oblong ovate, dark reddish brown or black, shining. Head with the anterior margin closely, the vertex sparingly and coarsely punctured; prothorax transverse, a little longer than in the allied species, convex, rounded at the sides, widest just before the base, a little narrowed behind, the hind angles rectangular, narrowed and rounded in front to the slightly pointed front angles, anterior margin feebly emarginate and sinuate on each side near the angles just behind the eyes, base strongly bisinuate and with a short oblique feeble impression on each side near the middle, unequally punctured, the sides rather coarsely and confluently, the disc sparingly and finely; elytra a little wider than the thorax at the base, somewhat rounded at the sides, with rows of fine punctures, the interstices finely and sparingly punctured; legs and antennæ red; mandibles toothed above; intercoxal process pointed in front.

Length 7–8 millim.

Hab. Nicaragua, Granada, Chinandega (*Sallé*), Chontales (*Belt*).

Allied to *E. variabilis*, but shorter, the thorax a little less transverse, and more unequally punctured &c.

9. Emmenastus rotundicollis.

Winged, oblong ovate, reddish brown, shining. Head coarsely and closely punctured; prothorax broad, transverse, convex, strongly rounded at the sides, widest a little before the base, slightly narrowed behind to the obtuse hind angles, narrowed in front to the subacute front angles, anterior margin on each side feebly emarginate and sinuate near the angles just behind the eyes, base bisinuate and feebly impressed transversely on each side near the middle, closely coarsely and almost equally punctured, the punctures a little confluent at the sides; elytra the width of the thorax at the base, with rows of rather coarse punctures (somewhat indistinct towards the suture) distinct to the apex, the interstices with scattered fine punctures; legs and antennæ red; intercoxal process pointed in front; mandibles toothed above.

Length 7½ millim.

Hab. Mexico (*coll. F. Bates*).

One example. This species is labelled *Hylocurus dermestoides*, Chev.; *E. variabilis* also bears the same name in the Sallé collection. *E. rotundicollis* may be known from all the species here recorded by the strongly rounded sides (especially behind) of its comparatively broad thorax.

10. **Emmenastus parallelus.**

Winged, elongate oval, moderately convex, reddish brown or black, rather dull. Head closely and coarsely punctured; prothorax transverse, not very convex, widest behind, a little narrowed in front, the anterior angles somewhat prominent and subacute, hind angles rectangular, closely, rather coarsely, and subequally punctured, the punctures a little confluent at the sides, the base feebly bisinuate; elytra scarcely wider than the thorax, the sides rather straight, with rows of fine punctures distinct to the apex, the interstices finely and sparingly punctured; antennæ and legs red; intercoxal process pointed in front.

Length 7–7½ millim.

Hab. Mexico (*coll. F. Bates*).

Two examples. Allied to *E. longulus*, Lec., but more parallel, duller, the thorax relatively larger and broader and more evenly punctured; in one of these examples the sides of the thorax are a little less rounded in front, and the anterior angles more acute and prominent.

11. **Emmenastus intermedius.**

Winged, oblong ovate, very convex, black, shining. Head with the anterior margin closely, the vertex sparingly and coarsely punctured; prothorax strongly convex, moderately transverse, widest before the base, sides nearly straight just in front of the rectangular hind angles, but little narrowed behind, rounded and narrowed in front to the slightly acute angles, anterior margin sinuate and emarginate on each side within the angles and just behind the eyes, somewhat coarsely and confluently punctured at the sides, more finely and widely punctured in the middle, base bisinuate and with a feeble triangular impression on each side near the middle; elytra convex, the width of the thorax at the base, with rows of fine punctures distinct to the apex, the interstices with scattered not very fine punctures, the rows of punctures not so regular or distinct towards the suture; legs and antennæ red; mandibles strongly toothed above; intercoxal process pointed in front.

Length 7½ millim.

Hab. Guatemala, Izabal (*Sallé*); Honduras (*Sallé*).

Two examples. This species may be known by its comparatively long, convex, broad thorax, its generally convex form, and the somewhat coarse punctuation of the interstices of the elytra.

12. **Emmenastus tenebrosus.**

Winged, oblong ovate, convex, reddish brown or black, shining. Head closely and rather coarsely punctured; prothorax convex, rounded at the sides, transverse, widest a little behind the middle, slightly narrowed behind to the obtuse subrectangular hind angles, narrowed in front and feebly sinuate before the rather prominent front angles, the base bisinuate, coarsely closely and regularly punctured, the punctures confluent at the sides, a small shallow rounded impression in the centre near the base; elytra scarcely wider than the thorax at the base, somewhat rounded at the sides, convex, with rows of not very coarse punctures distinct to the apex, the interstices somewhat coarsely and regularly punctured, the punctures in rows midway between the striæ; legs and antennæ reddish brown; intercoxal process slightly rounded in front.

Length 5½–6½ millim.

Hab. Mexico, Guanajuato (*Sallé*).

Seven examples. In one or two of these specimens the sides of the thorax are a little more rounded towards the front and not feebly sinuate, and the anterior angles more

obtuse. Narrower and more convex than *E. solitarius*, the thorax narrowed behind and more rounded at the sides, and the elytra not nearly so coarsely punctured; narrower, smaller, and more convex than *E. rotundicollis*, the thorax especially narrower, the rows of punctures of the elytra finer and not so distinct.

Of the form of *Eurymetopon rufipes*, but smaller; it may be known from all the species of *Emmenastus* here recorded, excepting *E. solitarius* and *E. rotundicollis*, by its closely, coarsely, and evenly punctured thorax, in which respect it resembles *E. texanus*, Lec.

13. Emmenastus alatus.

Winged, oblong ovate, convex, black, shining. Head coarsely and rather closely punctured; prothorax convex, moderately transverse, widest behind, scarcely narrowed at the base, rounded and narrowed in front to the subacute anterior angles, hind angles rather obtuse subrectangular, base bisinuate and feebly impressed on each side near the middle just within the margin, coarsely closely and rather unequally punctured, the punctures scattered in the middle, confluent at the sides, anterior margin feebly emarginate on each side just behind the eyes; elytra a little or scarcely wider than the thorax at the base, convex, with rows of coarsish punctures distinct to the apex, interstices closely and rather coarsely punctured; legs and antennæ red; intercoxal process rather pointed in front; mandibles toothed above.

Length 7–7½ millim.

Hab. GUATEMALA, near the city (*Salvin*).

Three examples. Larger, longer, and a little more convex than *E. salvini*, and with the thorax a little longer and less transverse.

I did not myself meet with this species, nor with *E. salvini*.

14. Emmenastus salvini.

Winged, oblong ovate, moderately convex, black. Head closely and rather coarsely punctured; prothorax transverse, not very convex, widest behind, narrowed and rounded in front, scarcely narrowed behind, angles rather obtuse and not prominent, anterior margin feebly emarginate on each side near the angles, base bisinuate and feebly impressed on each side near the middle just within the margin, rather coarsely and closely punctured, the punctures confluent at the sides; elytra a little wider than the thorax at the base, with rows of fine punctures distinct to the apex, interstices rather closely and finely punctured; legs and antennæ red; mandibles toothed above; intercoxal process pointed in front.

Length 6½ millim.

Hab. GUATEMALA, near the city (*Salvin*).

Four examples taken by Mr. Salvin near the Cerro del Carmen are all I have seen of this species.

Of the form of *E. canaliculatus*, but much smaller, the hind angles of the thorax more obtuse, the punctuation of the elytra finer, &c.

15. Emmenastus ambiguus.

Winged, oblong ovate, very convex, black, shining. Head coarsely but sparingly punctured; prothorax transverse, convex, rounded at the sides, widest behind, narrowed in front to the rather obtuse anterior angles, hind angles rectangular, the base bisinuate and with a short oblique obsolete impression on each side about the middle, with scattered rather coarse punctures, the punctures finer and more distant in the middle, coarser at the base, and a little confluent at the sides; elytra convex, the width of the thorax at the base, a little rounded at the sides, with rows of coarsish punctures distinct to the apex, the interstices flat and

finely and sparingly punctured, the punctures more numerous and distinct towards the suture at the base; legs and antennæ reddish brown.

Length $5\frac{1}{2}$ millim.

Hab. PANAMA, La Caldera in Chiriqui (*Champion*).

One example. Of the convex form of the *E. foveicollis* group, but with the thoracic foveæ obsolete, and represented by short, oblique, shallow impressions; it is nearest allied to *E. confusus*.

16. **Emmenastus guatemalensis.**

Winged, oblong ovate, very convex, dark reddish brown or black, shining. Head coarsely and closely punctured; prothorax transverse, convex, widest at the base, the sides rounded and narrowed in front to the obtuse anterior angles, the hind angles rectangular, coarsely closely and regularly punctured, the punctures but little finer towards the middle and scarcely confluent at the sides, base bisinuate; elytra with regular rows of coarse punctures distinct to the apex, the interstices somewhat coarsely punctured; antennæ and legs dark reddish brown; mandibles toothed above; intercoxal process slightly rounded in front.

Length 5–6 millim.

Hab. GUATEMALA, Zapote, San Gerónimo, Capetillo, Dueñas (*Champion*), Izabal (*Sallé*).

Resembling somewhat in its convex form *E. foveicollis* and allies, but without the deep thoracic foveæ.

17. **Emmenastus foveicollis.** (Tab. I. fig. 11.)

Winged, oblong ovate, very convex, dark reddish brown or black, shining. Head coarsely but not very closely punctured; prothorax very convex, transverse, strongly rounded at the sides, a little narrowed behind to the acute hind angles, narrowed in front to the rather obtuse anterior angles, base bisinuate and the margin raised and with a deep triangular fovea on each side about the middle, the foveæ sharply and abruptly defined outwardly, more or less connected inwardly by a central transverse basal impression, closely coarsely and unequally punctured, the punctures somewhat confluent at the sides, scattered on the disc, the central part of the base between the foveæ very sparingly punctured and almost smooth; elytra about the width of the thorax at the base, rounded somewhat at the sides, very convex, with rows of coarse punctures distinct to the apex, interstices finely and confusedly punctured; legs and antennæ red; intercoxal process pointed in front; mandibles toothed above.

Length $5\frac{1}{2}$–$6\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, Aceytuno (*Salvin*), Panajachel, Dueñas, San Gerónimo, Capetillo (*Champion*); NICARAGUA, Granada (*Sallé*); COSTA RICA, Irazu (*Rogers*).

Of a different facies from the preceding species, from all of which it may be at once known by its convex form and deep thoracic foveæ. The single example from Nicaragua differs a little from the numerous individuals from Guatemala in having the thorax a little smoother and longer, the elytra a little broader and a little more rounded at the sides, and the interstices more finely punctured. The specimen from Costa Rica is more typical, but with the rows of elytral punctures coarser. This species is rather

common in Guatemala, and found by beating herbage &c., and sometimes coming to light at night.

18. **Emmenastus confusus.**

Winged, oblong ovate, convex, dark reddish brown or black, shining. Head coarsely and somewhat closely punctured; prothorax transverse, convex, widest behind, rounded at the sides and narrowed in front, the anterior angles rather obtuse and scarcely prominent, hind angles rectangular, the base bisinuate, a narrow, deep transverse triangular fovea (sharply defined outwardly) on each side about the middle just within the raised basal margin, somewhat coarsely closely and regularly punctured, the punctures finer and more scattered on the disc towards the base and sometimes a little confluent at the sides; elytra the width of the thorax at the base, convex, a little rounded at the sides, with rows of punctures (coarse at the sides, finer and closer towards the suture) distinct to the apex, interstices flat with rather regular rows of punctures almost as coarse as those of the striæ towards the suture and sparingly irregularly and very finely punctured at the sides; legs and antennæ reddish brown; mandibles sharply toothed above.
Length 6–7 millim.

Hab. GUATEMALA, Zapote, Coatepeque, Capetillo, El Tumbador (*Champion*).

Allied to *E. foveicollis*, but less convex, a little flatter above, the elytra differently punctured; it may be known from both *E. foveicollis* and *E. lævicollis* by its narrower and more transverse thoracic basal foveæ. Found by beating herbage.

19. **Emmenastus lævicollis.**

Winged, oblong ovate, very convex, dark reddish brown or black, shining. Head coarsely but sparingly punctured; prothorax convex, transverse, widest at the base, the sides rounded and narrowed in front, anterior angles obtuse and scarcely prominent, hind angles distinct and rectangular, the base bisinuate, a deep triangular fovea (sharply defined outwardly) on each side about the middle just within the raised basal margin, the base between the foveæ with a central shallow transverse impression, with scattered rather coarse punctures, the disc more sparingly and finely punctured and almost smooth towards the base, sides with larger coarser punctures which are rarely confluent; elytra convex, about as wide as the thorax at the base, slightly rounded at the sides, with rows of coarse punctures distinct to the apex, the interstices flat and sparingly and very finely punctured; legs and antennæ reddish brown; mandibles toothed above; intercoxal process pointed in front.
Length 5–6½ millim.

Hab. PANAMA, Tolé, Volcan de Chiriqui, Caldera, Peña blanca (*Champion*).

Closely allied to *E. foveicollis*, but with the thorax and the interstices of the elytra smoother and more sparingly and finely punctured; the thorax less convex, broader behind, and less strongly rounded at the sides. On herbage.

Sect. 2. *Apterous Species.*

20. **Emmenastus mancus.**

Apterous, oblong ovate, moderately convex, dark reddish brown or black, rather dull. Head coarsely and closely punctured; prothorax transverse, convex, widest behind before the base, narrowed in front, the anterior angles a little prominent, hind angles rectangular, closely subequally and rather coarsely punctured, the punctures a little confluent at the sides, base bisinuate, the disc slightly impressed near

the base; elytra rather long, convex, a little rounded at the sides, about the width of the thorax, with rows of very fine punctures distinct to the apex, the interstices with scattered finer punctures; legs and antennæ red. Beneath coarsely punctured, metasternum long, intercoxal process pointed in front.
Length 6½–7 millim.

Hab. Mexico, Puebla (*Sallé*), Tehuacan (*Höge*).

Three examples. Of the form of some of the winged species (*E. longulus*, &c.); narrower and longer than any of the apterous species known to me.

21. **Emmenastus glabratus.** (Tab. I. fig. 8.)

Apterous, oblong ovate, convex, black, shining. Head coarsely and closely punctured; prothorax transverse, moderately convex, widest behind, narrowed in front, anterior angles obtuse and a little prominent, hind angles obtuse, the base nearly straight, closely evenly and rather coarsely punctured, the punctures a little confluent at the sides; elytra convex, a little wider than the thorax at the base, with regular rows of coarse punctures distinct to the apex, the interstices finely and sparingly punctured; legs and antennæ reddish brown.
Length 7–8 millim.

Hab. Mexico (*coll. F. Bates*), Tehuacan, Oaxaca (*Höge*).

Taken in numbers by Höge at Tehuacan. Larger, broader, and not so closely punctured as *E. obesus*, Lec., from New Mexico &c., the punctures of the elytral striæ much coarser.

22. **Emmenastus curtus.**

Apterous, ovate, very convex, black, rather dull. Head very closely and coarsely punctured; prothorax transverse, strongly convex, rounded at the sides, widest just before the base, narrowed in front, the angles obtuse, base nearly straight, very closely regularly and rather coarsely punctured, the punctures a little confluent at the sides, feebly impressed transversely before the base; elytra a little wider than the thorax at the base, very convex, rounded at the sides, somewhat closely regularly and coarsely punctured, with rows of scarcely coarser punctures, distinct at the sides, obsolete towards the suture and not reaching the apex. Beneath shining, coarsely punctured; intercoxal process pointed in front. Legs and antennæ reddish brown.
Length 5–6½ millim.

Hab. Mexico (*coll. F. Bates*), Tehuacan (*Höge*).

Taken in some numbers by Höge. This species is comparatively shorter, broader, and more convex than any of the apterous species here described. The thorax is very closely and evenly, and almost confluently punctured.

23. **Emmenastus lentus.**

Apterous, oblong ovate, convex, dark reddish brown, shining. Head reddish brown, coarsely and closely punctured, rugulose; prothorax reddish brown, convex, transverse, widest just before the base, a little narrowed behind, narrowed in front, but little rounded at the sides, the anterior and posterior angles obtuse, the base straight, closely regularly and somewhat finely punctured, the punctures confluent at the sides; elytra convex, a little wider than the thorax at the base, slightly rounded at the sides,

with irregular rows of rather fine punctures, the punctures finer or indistinct towards the suture and at the apex, the interstices finely and equally punctured.
Length $7\frac{1}{2}$ millim.

Hab. MEXICO, Monclova in Coahuila (*Dr. Palmer*).

One example.

24. Emmenastus rugicollis.

Apterous, oblong ovate, convex, black, rather dull. Head closely and coarsely punctured, longitudinally rugulose; prothorax broad, transversely convex, rounded at the sides, widest a little before the base, very slightly narrowed behind, narrowed in front, anterior and posterior angles obtuse and not prominent, very closely regularly and somewhat coarsely punctured, the punctures longitudinally confluent, a central shallow impression behind near the base, the base almost straight; elytra about the width of the thorax, convex, closely and rather coarsely punctured, with indistinct rows of coarser punctures not reaching the apex, and distinct only at the sides, obsolete towards the suture; legs and antennæ reddish brown.
Length 6 millim.

Hab. MEXICO, San Luis Potosi (*Dr. Palmer*).

One example.

25. Emmenastus pulvinatus.

Apterous, oblong ovate, convex, dull reddish brown or black, the upper surface covered with scattered fine powdery-like scales, rather shining. Head broadly, shallowly, and transversely impressed in front, coarsely and closely punctured; prothorax transverse, convex, rather strongly rounded at the sides, widest a little before the base, narrowed in front, a little narrowed behind, the angles obtuse, closely evenly and rather finely punctured, the punctures a little confluent at the sides, base nearly straight; elytra about as wide as the thorax, convex, rather short, somewhat rounded at the sides, with indistinct rows of fine punctures obsolete towards the suture and scarcely reaching the apex, the interstices closely and finely punctured; legs and antennæ red. Beneath reddish brown, shining, coarsely punctured; intercoxal process rounded in front.
Length 6–$6\frac{1}{2}$ millim.

Hab. MEXICO, Oaxaca (*Sallé*).

Three examples. Shorter than *E. picipes*, the thorax comparatively broader, the striæ of the elytra finer and obsolete towards the suture.

26. Emmenastus picipes.

Apterous, oblong ovate, very convex, dark reddish brown or black, shining. Head coarsely and closely punctured; prothorax transverse, very convex, rounded at the sides, widest before the base, a little narrowed behind to the obtuse hind angles, narrowed in front, anterior angles but little prominent and obtuse, rather coarsely closely and regularly punctured, the punctures a little confluent at the sides, a small rounded impression near the base in front of the scutellum; elytra convex, a little wider than the thorax at the base, rounded at the sides, with distinct regular rows of coarsish punctures distinct to the apex, the rows of punctures scarcely coarser outwardly, and equally distinct towards the suture, the interstices finely and rather closely punctured; legs and antennæ reddish brown. Beneath shining, rather coarsely punctured; intercoxal process slightly rounded in front.
Length 7 millim.

Hab. MEXICO, Capulalpam, Oaxaca (*Sallé*).

Three examples. Labelled *Hylocurus picipes*, Chev., in the Sallé collection.

Group EPITRAGIDES.

This group is well represented in Central America, and the finest species of *Epitragus* are found in Mexico.

Schœnicus might with advantage be divided, but till the numerous South-American species of Epitragides are worked out, it is better not to make new, and perhaps unnecessary, genera. Haag and Mäklin have studied this group a good deal, with, I believe, the intention of monographing the species, but, as far as I am aware, nothing has been published by them. Many of the species in the Sallé and in Mr. F. Bates's collection bear manuscript names of these authors; these names I have in most cases adopted. The species, with a few exceptions, are not of wide distribution.

SCHŒNICUS.

Schœnicus, Leconte, New Species Col. p. 109 (1866); Horn, Rev. Ten. N. A. p. 265 (1870); Lec. & Horn, Class. Col. N. A. p. 363 (1883).

Described from a single North-American species; numerous others occur in Central America. Under this genus I have included, with the exception of *Tydeolus*, all those species in which the prosternum is not received by the mesosternum. Three species (*S. vestitus*, *pectoralis*, and *yucatanensis*) have the prosternum horizontal and a little produced (though never very prominent as in *Epitragus*); the remainder have the prosternum rounded and declivous behind.

Sect. 1. *Prosternum rounded, declivous behind.*

1. **Schœnicus oculatus.** (Tab. I. fig. 14.)

Elongate oval, subparallel, convex, dark æneous, shining. Head short and broad, deeply impressed on each side of the epistoma, which is a little produced and rounded, side lobes rather prominent, with scattered coarse punctures; the eyes rounded, prominent, and coarsely granulated; prothorax transverse, subquadrate, convex, slightly rounded at the sides, a little narrowed in front to the obtuse anterior angles, widest about the middle, very slightly narrowed and sinuate behind before the somewhat prominent hind angles, anterior margin nearly straight, base bisinuate, closely regularly and rather coarsely punctured; elytra long, convex, a little wider than the thorax, the sides parallel to beyond the middle, with regular rows of punctures distinct to the apex, the interstices sparingly and finely punctured.

Length 7–7½ millim.

Hab. Panama, San Feliz, San Lorenzo, Volcan de Chiriqui (*Champion*).

This species may be at once known by its long parallel form, subquadrate thorax, short head, and coarsely granulated eyes.

2. **Schœnicus panamensis.** (Tab. I. fig. 15.)

Oblong ovate, convex, reddish brown with an æneous tinge, or dark æneous, shining. Head with scattered rather coarse punctures; the eyes rather prominent and comparatively coarsely granulated; prothorax a little broader than long, widest at the base, slightly rounded at the sides, gradually narrowed from the base, sides feebly sinuate near the rather prominent anterior angles, feebly sinuate behind in front of the prominent outwardly directed subacute hind angles, base strongly bisinuate, closely and rather coarsely

punctured, a little more coarsely and more sparingly on the disc, especially at the base; elytra wider than the thorax at the base, the sides rather straight and very little rounded, with regular rows of coarse punctures distinct to the apex, the interstices each with a row of very fine punctures, the base and suture with some scattered fine punctures.

Length 8½–9½ millim.

Hab. Costa Rica (*Van Patten*); Panama, Volcan de Chiriqui, Tolé, San Feliz, Peña blanca, David, Bugaba, La Caldera, San Lorenzo, Taboga Island (*Champion*).

This is not very closely allied to any of the species of *Schœnicus* here recorded. Larger and broader than *S. oculatus*; the head and thorax of a different shape; the eyes smoother, less prominent, and less rounded, though a little more prominent and more coarsely granulated than in the other species of the genus. It appears to be widely distributed in the State of Panama, and occurring also in Costa Rica.

3. Schœnicus salvini.

Schœnicus salvini, F. Bates in litt.

Oblong ovate, convex, brassy æneous. Head very closely and somewhat coarsely punctured; prothorax a little broader than long, widest at the base, sides rounded and narrowed from the base forwards, anterior angles obtuse not produced, hind angles rectangular slightly acute, anterior margin nearly straight, the base strongly bisinuate, very closely evenly and coarsely punctured; elytra broader than the thorax at the base, the sides rounded, with indistinct rows of coarsish punctures, the interstices confusedly closely and not very finely punctured, the punctures nearly as coarse as those of the striæ, towards the sides and at the apex with fine irregular transverse wrinkles.

Length 9–10½ millim.

Hab. Guatemala, Chinautla, Dueñas (*Salvin*), Capetillo, Dueñas, San Gerónimo (*Champion*); Costa Rica (*coll. F. Bates*).

This species may be known by its brassy colour and the confused punctuation of the elytra.

4. Schœnicus viridis.

Oblong ovate, convex, rather dull, greenish or dark bronze, somewhat variable in colour. Head closely and rather coarsely punctured, epistoma a little produced triangularly and deflexed in front; prothorax about as long as broad, convex, the sides straight at the base and narrowed and rounded in front, broadest behind, anterior angles obtuse, hind angles rectangular, the base strongly bisinuate, closely evenly and rather coarsely punctured, sometimes with a smooth indistinct central line; elytra wider than the thorax, with irregular rows of coarsish punctures, the interstices each with one or two rows of finer punctures, the base and suture more finely and not so regularly punctured, finely wrinkled transversely at the sides.

Length 9–11 millim.

Hab. Mexico (*coll. F. Bates*), Yolos, Oaxaca (*Sallé*), Esperanza, Oaxaca (*Höge*); Guatemala, Tocoy (*Champion*).

Pretty common in Mexico and in most collections.

5. Schœnicus rufipes.

Epitragus rufipes, Haag in litt.

Oblong ovate, convex, dark æneous, sometimes with a greenish tinge, when fresh covered with ashy efflorescence.

Head closely and somewhat coarsely punctured, the epistoma produced and a little deflexed and rounded in front; prothorax long, about as long as broad, convex, widest at the base, sides straight behind, rounded and narrowed in front, anterior angles obtuse not prominent, hind angles rectangular, anterior margin nearly straight, the base strongly bisinuate, very closely evenly and somewhat coarsely punctured; elytra a little wider than the thorax, convex, with not very regular rows of coarsish punctures distinct to the apex, the interstices with finer scattered punctures and towards the sides and at the apex with some very fine indistinct transverse wrinkles. Legs red or reddish brown; the femora paler, and in some examples bright red.

Length 8½–10 millim.

Hab. Nicaragua (*Sallé*), Chontales (*Belt*, *Janson*).

I have only seen this species from Nicaragua. Closely allied to *S. viridis*, and with the sides of the thorax straight behind as in that species; but comparatively narrower, the rows of elytral punctures more regular and better defined, and the legs red.

6. Schœnicus impressus.

Oblong oval, convex, greenish bronze, shining. Head closely and rather coarsely punctured; prothorax a little broader than long, the sides straight behind, rounded and narrowed in front to the obtuse anterior angles, hind angles rectangular, the base bisinuate, closely and rather coarsely punctured, the punctuation closer, finer, and somewhat confluent at the sides, shallowly impressed on each side near the margin a little in front of the hind angles, with an indistinct smooth central line; elytra wider than the thorax, convex, with regular rows of coarse punctures, the interstices with one or two rows of finer punctures, the base and suture more closely and finely punctured, finely wrinkled transversely at the sides.

Length 9½ millim.

Hab. Costa Rica (*Van Patten*).

One example. Very near *S. viridis*, but smoother, narrower, more shining, not quite so convex, and the rows of elytral punctures more distinct.

7. Schœnicus chalybeus. (Tab. I. fig. 16.)

Epitragus chalybeus, Deyr. in litt.

Oblong ovate, convex, dark greenish bronze, sometimes bronze with a bluish tint, rather shining. Head coarsely and closely punctured; prothorax transverse, strongly convex, rounded at the sides, widest a little before the base, scarcely narrowed behind, narrowed in front, the angles obtuse not prominent, closely, evenly, and very coarsely punctured, the base strongly bisinuate; elytra wider than the thorax, with regular rows of moderately coarse punctures, the interstices each with one or two rows of finer punctures, more finely and closely punctured along the suture and at the base.

Length 8–9 millim.

Hab. Mexico (*coll. F. Bates*), Esperanza, Oaxaca (*Höge*), El Camaron (*Sallé*).

Sent by Höge in some numbers. Near *S. viridis*, but more shining, the thorax shorter, the sides more rounded and not straight behind; the punctuation of the thorax coarser, and of the elytra coarser, more regular, and less confused.

8. Schœnicus difficilis.

Epitragus difficilis, Boucard in litt.

Oblong ovate, convex, greenish bronze. Head coarsely and closely punctured; prothorax of the same form as

in *S. chalybeus*, very closely, evenly, and rather coarsely punctured; elytra wider than the thorax, confusedly, rather finely, and not very closely punctured, without any rows of coarse punctures.
Length 9–10 millim.

Hab. MEXICO (*coll. F. Bates*), El Camaron (*Sallé*).

Four examples, apparently all females. Very close to *S. chalybeus* and sent from the same locality. The elytra, however, are so differently punctured that it seems scarcely possible to unite them; the thorax is also more closely and finely punctured. Labelled *E. punctatissimus*, Chev., in the Sallé collection.

9. Schœnicus basalis.

Oblong oval, rather broad, convex, dark greenish bronze, dull. Head coarsely and closely punctured; prothorax scarcely broader than long, convex, widest at the base, the sides nearly straight towards the base, rounded and narrowed in front, the anterior angles not prominent, the hind angles rectangular, the base strongly bisinuate, very closely and coarsely punctured, the punctures a little confluent, rounded and shallow; elytra comparatively broad, rounded at the sides, wider than the thorax, closely finely and shallowly punctured, the punctures indistinctly arranged in rows, finely and shallowly wrinkled transversely towards the sides, the base more closely and confusedly punctured. Beneath dull, very closely and shallowly punctured.
Length 9–9½ millim.

Hab. MEXICO, Almolonga (*Höge*).

Two examples. Duller and broader than its allies, the elytra with rounded, very shallow punctures; the thorax very closely almost confluently punctured.

10. Schœnicus niger.

Oblong ovate, convex, dull bronze-black. Head closely and finely punctured; prothorax a little broader than long, convex, widest behind, the sides rounded and narrowed in front, feebly rounded and almost straight behind, the lateral margins a little thickened, the anterior angles obtuse, the hind angles scarcely prominent, subrectangular, the base strongly bisinuate, closely evenly and coarsely punctured, with an indistinct or obsolete smooth central line; elytra rather long, convex, somewhat pointed behind, wider than the thorax, with irregular rows of coarsish punctures, the interstices confusedly and sparingly punctured, the punctures scarcely finer than those of the striæ, indistinctly wrinkled transversely at the sides.
Length 9–9½ millim.

Hab. GUATEMALA (*Sallé*), San Joaquin (*Champion*).

Two examples. Labelled *Epitragus niger*, Haag, in the Sallé collection. Narrower, smaller, and more convex than *S. viridis*; the elytra somewhat pointed behind, almost black in colour, and more sparingly punctured.

Sect. 2. *Prosternum a little produced behind, horizontal.*

11. Schœnicus pectoralis. (Tab. I. fig. 17.)

Oblong ovate, convex, bright cupreous or greenish bronze. Head closely and coarsely punctured, the eyes carinated within; prothorax scarcely broader than long, widest at the base, the sides rounded and narrowing to the front, feebly sinuate before the rather prominent outwardly directed hind angles, the anterior angles a little produced, obtuse, the base bisinuate, closely and rather coarsely punctured, a little more finely and closely at the sides; elytra wider than the thorax, sides rounded, widest about the

middle, rather coarsely, closely, and confusedly punctured, usual rows of punctures obsolete; legs rather long; prosternum deflexed behind and slightly produced into a short, broad, horizontal projection truncated at the apex; mesosternum thickened into a rounded smooth elevation between the intermediate coxæ; ventral segments very finely and confusedly punctured towards the apex, the first segment smooth with scattered punctures.

Length 11½–12½ millim.

Hab. Mexico, Puebla (*coll. F. Bates*), Izucar and Puebla (*Sallé*).

Four examples. This species may be known by the differently shaped prosternum.

12. Schœnicus vestitus.

Oblong ovate, convex, dull dark bronze, covered with scattered short appressed cinereous hairs, when fresh completely clothed with a yellowish-white mealy efflorescence. Head closely and finely punctured, the epistoma not produced and feebly rounded and emarginate in front, the labrum in consequence appearing very prominent; prothorax broader than long, convex, widest at the base, the sides rounded and narrowing from the base, the hind angles rectangular, front angles obtuse not prominent, the base bisinuate, a shallow impression in the middle behind in front of the scutellum, closely and rather coarsely punctured, the punctuation closer and finer at the sides; elytra broader than the thorax, rather closely confusedly and somewhat coarsely punctured, and with shallow dorsal grooves, in each of which is an indistinct or interrupted row of coarser punctures; prosternum horizontal, a little concave, produced behind into a thin short lobe rounded at the apex; mesosternum a little thickened between the intermediate coxæ, in some examples slightly concave in front and with a short indistinct blunt tubercle on each side.

Length 9–11 millim.

Hab. Mexico, Vera Cruz (*Sallé*), Oaxaca (*Höge*).

Found by Höge in some numbers. This species might be placed either in *Schœnicus* or *Epitragus*, having some of the characters of both.

13. Schœnicus yucatanensis.

Epitragus yucatecus, Deyr. in litt.

Oblong obovate, convex, dark reddish brown, with fine scattered yellowish pubescence. Head closely and rather coarsely punctured, the epistoma emarginate in front; prothorax a little broader than long, convex in front, widest at the base, the sides rounded and narrowing from the base, hind angles subacute not prominent, anterior angles not prominent, the base bisinuate, very closely equally and rather coarsely punctured; elytra wider than the thorax, widest behind the middle, with rows of shallow grooves obsolete at the apex, the interstices closely finely and confusedly punctured, the dorsal grooves each with an irregular row of slightly coarser impressions; the prosternum horizontal, a little produced behind, the apex rounded; the mesosternum rounded and declivous in front, not ridged or formed to receive the prosternum.

Length 10 millim.

Hab. Mexico (*coll. F. Bates*).

One example. The structure of the pro- and mesosternum in this species is the same as in *S. vestitus*, from which, and from *Epitragus emarginatus* and *E. sallæi* (apart from the differently formed mesosternum), it may be known by its almost obovate form.

EPITRAGUS.

Epitragus, Latreille, Hist. Nat. Crust. et Ins. x. p. 322 (1804); Lec. Class. Col. N. A. part i. p. 215 (1862); Horn, Rev. Ten. N. A. p. 263 (1870); Lec. & Horn, Class. Col. N. A. p. 363 (1883).

This New-World genus, as here understood, ranges from the Southern United States to the Argentine Republic, occurring also in the Sandwich Islands and in the West Indies. Most of the Peruvian and all the Chilian species at present referred to *Epitragus* will probably have to be placed in other genera. All the species here referred to it have a prominent prosternal process received by the mesosternum, which is furnished with a strong V-shaped elevation, concave within. The genus is readily divided into two sections—one with the middle lobe of the epistoma emarginate in front, *E. fuscus*, Latr., from Cayenne, and the type of the genus, belongs to this group, which ranges from Mexico to Buenos Ayres; the other, with the epistoma produced and rounded in front (the anterior margin of the head appearing trilobed), of wider and more northern distribution. Numerous large metallic brassy or bronze species of the second group are peculiar to the Southern States, Mexico, and Guatemala. The females (not the males, as stated by Leconte) of some of the species found in the Southern States and Mexico have the disc of the thorax flattened and with a prominent elevation on each side, often excavated within and enclosing a scutiform or triangular excavation. Some allied genera (*Nyctopetus* and *Geoborus*) are peculiar to Chili and Peru, and *Chilometopon*, Horn, to California. But few of the South-American species have been described as yet, though numerous in collections. *Epitragus* is well represented in Central America by upwards of thirty species. The different species are found upon leaves and herbage, and, unlike the allied groups, seem to like the sun. One species has been bred from cocoons found in the earth. These insects when freshly emerged are, in addition to the usual pubescence, densely covered with a sort of mealy efflorescence, which soon wears off.

Sect. 1. *Epistoma emarginate in front.*

1. **Epitragus aurulentus.** (Tab. I. fig. 19.)

Epitragus aurulentus, Kirsch, Berl. Zeit. 1866, p. 189[1].
Epitragus denticulatus, Mäklin in litt.

Hab. Mexico?; Costa Rica (*coll. F. Bates, Van Patten*), Irazu (*Rogers*); Panama, Volcan de Chiriqui, La Caldera, David, Bugaba, Tolé (*Champion*).—Colombia, Bogotá[1]; Jamaica; Brazil?

This is a common species in the State of Panama. It may be known from the others of the section, in which the epistoma is emarginate in front, by the variegated golden pubescence of the thorax; the thorax is wider behind, the hind angles more acute and the punctuation closer and finer, and the rows of elytral punctures deeper and stronger

(especially behind) than in the allied species. The long series of examples before me vary in size from 9½–14 millim.

In Mr. F. Bates's collection there is an example of this species labelled as from Mexico, and another Brazil (?); both localities require, I think, confirmation.

Some allied undescribed species from Venezuela, Colombia, and Brazil exist in collections.

2. Epitragus sallæi.

Epitragus sallæi, Haag in litt.

Oblong ovate, convex, reddish brown or piceous, shining, with very short scattered appressed yellow hairs, when fresh densely clothed with yellowish-white mealy efflorescence. Head closely and rather coarsely punctured, the epistoma rounded emarginate in front; prothorax broader than long, convex in front, widest at the base, the sides nearly straight behind, rounded and narrowing in front, hind angles subacute not prominent, anterior angles obtuse, the base bisinuate and with a shallow oblique impression on each side near the middle, closely and unequally punctured, the punctures fine and crowded at the sides and coarser and more scattered along the middle, and with a smooth central line; elytra wider than the thorax, convex, with rows of shallow grooves, in each of which are some scattered coarse punctures, the interstices very closely finely and confusedly punctured.

Length 9½–13½ millim.

Hab. Mexico (*coll. F. Bates*), Vera Cruz, Campeachy in Yucatan (*Sallé*); Guatemala, San Gerónimo, Paso Antonio (*Champion*); Nicaragua, Chinandega (*Sallé*).—South America, Peruvian Andes (*coll. F. Bates*).

Narrower and a little more convex than *E. aurulentus*; the thorax more convex, more rounded at the sides, the hind angles less acute, the punctuation unequal, and the pubescence less distinct. In some examples the thorax is a little narrower and more rounded at the sides than in others.

3. Epitragus emarginatus.

Closely allied to *E. sallæi*, and differing as follows:—The thorax is more equally and finely punctured, more rounded at the sides, nearly as wide at the base as the elytra, the punctures along the middle closer and finer, the basal impression on each side shallower and less distinct; the elytral grooves deeper, the interstices more finely and closely punctured.

Length 9–11 millim.

Hab. Panama, Volcan de Chiriqui, David (*Champion*).

Eight examples. From *E. aurulentus* it may be known by the thinner and less variegated pubescence of the upper surface, the narrower and more convex form, and the thorax less finely punctured and more rounded at the sides, with the hind angles more obtuse. An allied species from Carthagena is labelled *E. lebasii*, Dej., in Mr. F. Bates's collection; *E. fuscipes*, Latr., from Colombia, must also be allied to this species.

4. Epitragus nigricans. (Tab. I. fig. 18.)

Ovate, rather broad, convex, blackish bronze, clothed with very fine, short, scattered appressed cinereous hairs. Head with the anterior margin and the vertex very finely and closely, and the space between the eyes

rather coarsely punctured, the epistoma emarginate in front and not produced; prothorax almost as long as broad, convex, widest at the base, the sides rounded and strongly narrowed in front, the hind angles not acute, the front angles obtuse, finely, very closely, and equally punctured, with a smooth narrow central line, and a shallow transverse impression near the base in front of the scutellum; elytra a little broader than the thorax at the base, rather short, and strongly convex, with regular rows of coarsish punctures, the interstices very closely, finely, and confusedly punctured.

Length 10 millim.

Hab. PANAMA, Tolé (*Champion*).—COLOMBIA, Carthagena (*coll. F. Bates*).

One example from each locality. This species may be known by its short, broad, convex form, its dark colour, and the very fine close punctuation of the thorax and of the interstices of the elytra.

Sect. 2. *Epistoma produced and rounded in front.*

a. *Sexes dissimilar; the disc of the thorax in the female flattened or excavated, and often with a ridge on each side.*

5. **Epitragus bicarinatus.** (Tab. I. figg. 21 ♀, 22 ♂.)

Oblong ovate, rather broad, brassy with a cupreous tinge, somewhat densely clothed with yellowish pubescence. Head long, closely and finely punctured, the epistoma produced and rounded in front,—in the female transversely impressed behind the eyes, the vertex raised in the middle and longitudinally convex, and the eyes feebly carinated within; prothorax—in the female smooth, shining, scarcely pubescent, very sparingly and finely punctured, broader than long, narrowing from the base forwards, the lateral margins thickened and reflexed and a little sinuate towards the front, the anterior angles very prominent, acute and parallel, the hind angles acute, prominent, and outwardly directed, the base bisinuate, the disc with a prominent oblique ridge on each side extending to the anterior margin and enclosing a long scutiform depression, on each side, a little before the middle, between the elevations and the lateral margin a deep rounded impression, the anterior margin a little raised and emarginate between the elevations,—in the male closely and finely punctured, not smoother or less pubescent than the elytra, about as long as broad, the lateral margins not thickened, the angles acute and prominent, with an indistinct central channel, the disc flattened in front, and with a shallow impression at the base in front of the scutellum; elytra broader than the thorax, scarcely narrowing behind, very closely and finely punctured.

Length 12½–13½ millim. (♂ ♀.)

Hab. MEXICO, Vera Cruz (*Sallé*), Almolonga and Jalapa (*Höge*).

Sent in plenty by Höge, and labelled *E. bicarinatus*, Chev., in the Sallé collection. The sexes of this species are so dissimilar, that I, at first, felt some hesitation in considering them as of one species; Höge sent numbers of each from both localities. I have dissected a large number of examples, and find that those with the thorax ridged are females, and those with the thorax simple males. The males of the allied *E. acutus*, Lec., *E. arundinis*, Lec., and *E. canaliculatus*, Say, are stated by Leconte to have the thorax ridged; but in the allied Central-American species I find the reverse to be the case. The female of *E. bicarinatus* may be known at once from its allies by the structure of the long exserted head, and by the smooth, shining, acute-angled and ridged thorax.

6. **Epitragus ornatus.** (Tab. I. fig. 20.)

Oblong ovate, rather broad, brassy æneous, clothed with cinereous pubescence. Head rather short, closely and finely punctured, epistoma produced and rounded in front; prothorax—in the female broader than long, narrowing from the base forwards, the lateral margins sinuate (not straight) thickened and reflexed and abruptly narrowing in front, the base bisinuate, the disc with an oblique ridge on each side extending to the anterior margin (which is a little raised and feebly emarginate between) and enclosing a large flattened shield-shaped impression, the elevations a little thinner in front and each with a tuft of yellowish decumbent hair, the anterior angles acute, prominent, and parallel, the hind angles thickened and subacute, with a deep rounded excavation on each side near the base, smooth, shining, very finely and sparingly punctured, sparingly pubescent,—in the male about as long as broad, very slightly rounded at the sides, closely and finely punctured, with a smooth central line, and the base with a feeble oblique impression on each side just within the margin; elytra short, broader than the thorax, scarcely narrowing behind, very closely, finely, and equally punctured.

Length 12–12½ millim. (♂ ♀.)

Hab. Mexico, Matamoras, Puebla (*coll. F. Bates*), Izucar, Guanajuato (*Sallé*).

Six examples. I have seen this species labelled *E. acutus*, Lec. The female of *E. ornatus* may be known at once by the tufts of yellow hair on the front of the thorax.

7. **Epitragus högei.**

Oblong ovate, brassy with a cupreous tinge, clothed with yellowish or cinereous pubescence. Head closely and finely punctured, the vertex in the female with two broad shallow longitudinal impressions separated in the middle by a fine indistinct ridge, the epistoma produced and rounded in front; prothorax—in the female transverse, the sides straight, narrowing from the base forwards, the lateral margins a little thickened and reflexed, the front angles rather prominent, acute, and directed a little inwards, the hind angles acute but not very prominent, the base feebly bisinuate, with a smooth shallow central line or channel, the disc raised towards the front, flattened and excavated within, enclosing a shallow triangular impression, closely, finely, and equally punctured, rather shining,—in the male less transverse, more closely and distinctly punctured, the disc very slightly flattened [not excavated], and the prominent anterior angles broader and triangular; elytra wider than the thorax, very closely and finely punctured, with indistinct traces of shallow fine grooves.

Length 12–12½ millim. (♂ ♀.)

Hab. Mexico, Misantla, Jalapa, Cerro de Plumas (*Höge*).

Nine examples, of which seven are females. The male of this species may be known from that sex of *E. bicarinatus* by the thorax being less widened at the base, the front angles broad and triangular, and the hind angles less acute and not produced; the female is abundantly distinct.

8. **Epitragus angusticollis.**

Oblong ovate, brassy æneous, somewhat densely clothed with cinereous pubescence. Head closely and finely punctured, the epistoma produced and rounded in front; prothorax broader than long, comparatively narrow, widening but little behind, the lateral margins equally thickened and reflexed from base to apex, almost straight, the anterior angles are much produced, very prominent and acute and directed a little outwards, the hind angles obtuse not prominent, the base feebly bisinuate, with a smooth central line, the disc raised in front and with a rounded elevation on each side, shallowly impressed at the base and near the anterior margin, closely and finely punctured; elytra much wider than the thorax, closely and very

finely punctured, with shallow grooves (in which the punctures are a little coarser) distinct towards the suture and obsolete at the sides, and near the apex a few small raised points.
Length 12½ millim. (♀.)

Hab. MEXICO, Presidio (*Forrer*).

One female example. Near *E. högei* (♀), but with the thorax proportionately narrower, more closely and distinctly punctured, the lateral margins more strongly thickened, the anterior angles longer and more prominent, and the hind angles obtuse, the vertex not impressed, &c.

9. Epitragus littoralis.

Oblong ovate, rather broad, dull obscure æneous, clothed with short cinereous pubescence. Head exceedingly closely and finely punctured, the epistoma produced and rounded in front; prothorax in the female about as long as broad; the sides sinuate and narrowing from the base forwards, the lateral margins reflexed and thickened, the anterior angles acute, thin, straight, and not very prominent, the hind angles thickened, subacute, and not prominent, the disc with a very prominent, thick, longitudinal (not oblique) elevation on each side, starting from near the base and reaching the anterior margin (which is not raised between), the elevations rounded in front, the base very feebly bisinuate, finely and very sparingly punctured, almost smooth,—in the male broader and more convex, the sides rounded, the base more strongly bisinuate, extremely finely and closely punctured, and with a smooth central line; elytra wider than the thorax, rather broad, scarcely narrowing behind, exceedingly finely and closely punctured.
Length 13 millim. (♂ ♀.)

Hab. MEXICO, San Blas and Mazatlan (*Forrer*).

Two examples. In the female of this species the thoracic elevations are very prominent and subparallel, not oblique; the punctuation of the elytra is exceedingly fine and close. The male is from Mazatlan, and the female from San Blas; and though differing considerably, I believe they belong to one and the same species, an ally of *E. arundinis*, Lec.

10. Epitragus acutus.

Epitragus acutus, Lec., new sp., 373, p. 108 (1866)[1]; Horn, Rev. Ten. N. A. p. 264 (1870)[2].

Hab. NORTH AMERICA, Kansas and Texas [1 2].—MEXICO [1 2], Monclova in Coahuila, and Minas viejas (*Dr. Palmer*).

I refer with some doubt three examples to this species.

11. Epitragus rorulentus.

Oblong ovate, dull æneous, clothed with very fine scattered cinereous pubescence. Head closely and finely punctured; prothorax broader than long, narrowing from the base, the sides a little rounded (and sinuous near the front angles), the angles acute, but not very prominent, the base bisinuate, with a smooth central line (sometimes a little impressed, sometimes obsolete), closely and finely punctured,—the disc in the female raised and flattened in front, and with an elevation on each side extending to the anterior margin, enclosing a long scutiform excavation, and the lateral margins raised and thickened; elytra wider than

the thorax, rather broad, very closely and finely punctured, with some indistinct shallow grooves towards the suture.

Length 11–12 millim. (♂ ♀.)

Hab. Mexico, Monclova, Parras, and Saltillo in Coahuila (*Dr. Palmer*), Guanajuato (*Sallé*).

Seven examples, of which four are males. The sides of the thorax in the female of this species are not straight, but a little rounded (especially in front), and scarcely straighter than in the male; the angles, though somewhat acute, are not very prominent. Allied to *E. canaliculatus*, Say.

12. **Epitragus incisus.**

Oblong ovate, broad, obscure brass with a cupreous tinge, somewhat densely clothed with short cinereous pubescence. Head closely and finely punctured, epistoma produced and rounded in front, with a short, indistinct, longitudinal elevation; prothorax a little broader than long, the sides almost straight from the middle nearly to the base, slightly rounded and narrowing in front, the lateral margins reflexed and thin, the front angles a little prominent and acute, the hind angles scarcely prominent and subacute, the base strongly bisinuate and on each side from the central lobe to the angles straight, very finely and sparingly punctured, with a deep, broad, central channel from base to apex, the disc a little raised near the anterior margin on each side of the central groove; elytra wider than the thorax, comparatively broad and short, narrowing but little towards the apex, very finely and sparingly punctured, and with shallow grooves.

Length 13½–15½ millim. (♀.)

Hab. Mexico, Tres Marias Islands (*Forrer*).

Three examples. This species may be known by its comparatively broad form, and canaliculated thorax; the elytra are much broader than the thorax.

13. **Epitragus canaliculatus.**

Epitragus canaliculatus, Say, Long's 2nd Exped. p. 281 (1824)[1]; Leconte, New Sp. p. 109 (1866); Horn, Revis. Ten. N. A. p. 264 (1870)[2].

Hab. North America, Pennsylvania, Missouri, and Southern States[1], Colorado, New Mexico, and Arizona[2].—Mexico, Northern Sonora (*Morrison*), Chihuahua (*Buchan-Hepburn*).

I have not seen North-American examples of this species; the determination is, in consequence, a little doubtful.

14. **Epitragus scutatus.**

Oblong ovate, rather broad, dull æneous, with fine scattered cinereous pubescence. Head rather smooth, closely and very finely punctured, the eyes with a fine supraorbital carina above, the epistoma produced and rounded in front; prothorax broader than long, narrowing from the base, the lateral margins thickened, slightly rounded at the sides, and a little sinuate before the thickened, prominent, and acute front angles, the hind angles thickened and somewhat obtuse, not prominent, the base strongly bisinuate, the disc raised and flattened in front, and with a short elevation on each side enclosing a shallow scutiform excavation, the anterior margin between the elevations slightly raised and feebly emarginate, with an indistinct smooth

central line, and a shallow transverse impression at the base, the disc sparingly, and the sides closely and finely punctured; elytra wider than the thorax, rather short, closely, finely, and equally punctured.
Length 12 millim. (♀.)

Hab. Mexico, Guanajuato (*Sallé*).

One female example. Near *E. rorulentus*; the head with a fine supraorbital carina, the hind angles of the thorax obtuse, and the anterior angles thickened and very prominent.

15. Epitragus foveatus.

Ovate, rather broad, obscure bronze, thinly clothed with short, fine, cinereous pubescence. Head closely and finely punctured, the epistoma produced and rounded in front, the eyes carinated within; prothorax broader than long, narrowing from the base forwards, the sides almost straight, or rounded a little in front, the base bisinuate,—in the female the lateral margins are thickened and slightly reflexed, the disc with an oblique elevation on each side extending to and connected in front by an elevation of the anterior margin, the elevations enclosing a shield-shaped flattened space, which is sometimes feebly carinated in the middle, the raised part of the anterior margin feebly rounded, emarginate, closely and very finely punctured, the front angles a little prominent, subacute, the hind angles not prominent, subacute,—in the male the thorax is a little more rounded at the sides in front, the front angles a little more acute and prominent, the lateral margins not thickened, the elevations almost or quite obsolete, and the punctuation is more distinct; elytra broader than the thorax, rather short, and narrowing but little behind, with indistinct rows of fine punctures towards the suture, the interstices very finely and closely punctured, and with large scattered angular, or transverse, shallow, irregular wrinkles at the sides.
Length 9½–12½ millim. (♂ ♀.)

Hab. Mexico, Parada, Las Peras, Yolos (*Sallé*), Cerro de Plumas, Jalapa, Oaxaca (*Höge*).

Fourteen examples, of which ten are females. This species is allied to *E. acutus*, Lec., and others; from the species with similarly formed thorax, it may be known by the elytra being irregularly and strongly wrinkled towards the sides.

16. Epitragus metallicus.

Oblong ovate, convex, very variable in colour, metallic brass, æneous, or bronze, often tinged with blue, green, or cupreous, shining, clothed with ashy pubescence. Head somewhat coarsely and closely punctured, the epistoma rather convex, produced, and rounded in front, the lateral lobes a little prominent and divergent, and separated from the central lobe by a rather deep impression; prothorax in the male about as long as broad, in the female transverse and broader in front, narrowing from the base, the sides a little rounded, and often a little sinuate near the angles, the base bisinuate, the lateral margins very slightly thickened, the angles a little prominent (rarely produced) and subacute, sparingly and rather finely punctured (the disc sometimes almost smooth) in the male, more closely and coarsely punctured in the female, the female with a more or less distinct central channel and the disc flattened in front (sometimes with a feeble elevation on each side); elytra wider than the thorax, closely, distinctly, and rather coarsely punctured, with shallow grooves, which are sometimes obsolete.
Length 9–12½ millim. (♂ ♀.)

Hab. Mexico, Puebla, Toluca, Cuernavaca (*coll. F. Bates*), Cerro de Plumas, Jalapa, Mexico city, Misantla, Almolonga, Oaxaca (*Höge*), Izucar, Yolos, Juquila, Chiapas, Oaxaca, Cordova, Cuernavaca, Capulalpam, Puebla, Toluca, Orizaba, Totosinapan,

Guanajuato (*Sallé*), Mexico city, San Luis Potosi, Queretaro (*Dr. Palmer*); GUATEMALA, near the city (*Salvin*), Ostuncalco, Quezaltenango 7800 feet, Dueñas (*Champion*); COSTA RICA (*Van Patten, coll. F. Bates*).

Common and widely distributed in Mexico, becoming rarer southwards. The examination of a large number of specimens of both sexes from many localities has convinced me that they should all be referred to one and the same species. Narrower and more shining than *E. acutus*, *E. canaliculatus*, &c.; the disc of the thorax in the female only slightly flattened, and with a very feeble elevation (often quite obsolete) on each side; the lateral lobes of the front are slightly divergent, and separated by a distinct impression from the rather convex epistoma; the prevailing colour is bright metallic brass, varying to dark bluish bronze; in some examples the thoracic angles are more acute than in others, and the punctuation of the upper surface varies a good deal. A pair from Toluca have a distinct impression in the centre of the anterior margin of the thorax, and another impression midway between the eyes. Specimens of the dark forms denuded of pubescence are very puzzling. In Mr. F. Bates's collection there is an example of this species from Missouri, labelled *E. canaliculatus*, Say; it is possible, however, that there is some mistake about the locality, or that two species are confounded under this name by American entomologists. Labelled in the Sallé and other collections under the MS. names of *E. juvencus*, Dej., *conicicollis*, Chev., *plumbeus*, Dej., *niger*, Sturm, *angustatus*, Chev., *thoracicus*, Sturm, *angulatus*, Chev., *metallicus*, Haag, *ahenus*, Sturm, *cupreus*, Dej., *candezei*, Mäk., *chalybeus*, Chev., &c.

17. **Epitragus chevrolati.**

Ovate convex, bright brass with a cupreous tinge, densely clothed with yellowish-brown scales or hairs, and the head and thorax, in addition, with decumbent matted hair. Head convex above, coarsely and somewhat closely punctured, the epistoma convex, broad, produced and rounded in front, the pubescence long and matted, the labrum prominent and excavated within; prothorax broader than long, narrowing from the base, convex in front, the sides a little rounded, the angles not very prominent and subacute, finely and rather closely punctured, with a smooth central raised line slightly impressed at the base, and the disc in the female with a large, shallow, rounded impression before the middle, the base strongly bisinuate, the pubescence rather long and matted, and transversely arranged; elytra broad, convex, exceedingly finely and closely punctured, with shallow indistinct grooves, which are often obsolete, the apices rather blunt, and with a short marginal tooth on each side near the suture, the base slightly flattened in the middle.
Length 13–15 millim. (♂ ♀.)

Hab. MEXICO (*coll. F. Bates*), Cuernavaca, Puebla, Guanajuato (*Sallé*), Jalapa, Misantla (*Höge*), Ventanas (*Forrer*); GUATEMALA, near the city (*Salvin*); NICARAGUA, Chontales (*Belt*).

Rather common in Mexico, and labelled *E. chevrolati*, Bouc., in Mr. F. Bates's collection. A broad, convex, large species, bright metallic brass in colour, and very pubescent; the elytra bluntly toothed on each side near the apex. The Chontales specimen has the thorax more finely and closely punctured, though agreeing in other respects.

b. *Thorax similar in both sexes.*

18. Epitragus grandis.

Oblong ovate, dull brass, often with a cupreous tinge, somewhat densely clothed with fine cinereous pubescence, when fresh covered with a white mealy efflorescence. Head closely and finely punctured, the epistoma broad and convex, produced and rounded in front, the lateral lobes divergent and prominent; prothorax transverse, narrowing from the base, the sides a little rounded, the anterior margin nearly straight, the anterior angles obtuse and not produced, the hind angles acute and not very prominent, finely and closely punctured, with a smooth central line a little impressed at the base, the base bisinuate, and slightly impressed obliquely on each side, just within the margin; elytra broader than the thorax, rather long, finely, confusedly, and rather closely punctured, with shallow grooves, the apices feebly mucronate; the prosternal process longitudinally impressed in the middle, between the coxæ; the anterior tibiæ widened at the apex, and the outer angles bluntly toothed.

Length 15–18 millim. (♂ ♀.)

Hab. Mexico, Oaxaca (*coll. F. Bates*), Vera Cruz, Etla, Puebla (*Sallé*), Misantla, Jalapa, Almolonga (*Höge*), Ventanas, Presidio (*Forrer*).

This is the largest species of the group known to me. Labelled *E. pruinosus*, Chev., in the Sallé collection, a name used by Horn for another species.

19. Epitragus acutangulus.

Oblong ovate, convex, dark reddish-brown, inclining to bronze, sparingly clothed with fine cinereous pubescence. Head closely punctured (the vertex rather coarsely, the front finely and more closely), the epistoma produced and rounded in front, with a fine supraorbital carina; prothorax a little broader than long, convex, narrowing from the base, the sides rounded, the front angles acute and prominent, the hind angles acute, very prominent, and outwardly directed, finely, equally, and not very closely punctured, with a central line or groove [obsolete in front, distinct near the base], the base bisinuate, with an indistinct oblique impression on each side just within the margin; elytra wider than the thorax, narrowing a little towards the apex, closely and finely punctured, with shallow grooves.

Length 14½ millim.

Hab. Guatemala, Paraiso (*Champion*).

Near *E. grandis*, but smaller, the thoracic angles more acute and prominent, the lateral lobes of the front not divergent, the thorax more sparingly punctured, &c. One example.

20. Epitragus plicatus. (Tab. I. fig. 23.)

Ovate, broad, strongly convex, bright brass with a cupreous tinge, rarely dark bronze, shining, somewhat densely clothed with yellowish appressed hairs. Head convex, with some coarse scattered punctures between the eyes, the anterior margin and vertex closely and more finely punctured, the epistoma broad, convex, produced and rounded in front; prothorax broader than long, wide at the base, narrow in front, the sides scarcely rounded, nearly straight, convex in front, the front angles a little produced and obtuse, the hind angles acute, closely and finely punctured, the punctures more scattered on the disc, with a smooth central line, and a shallow transverse impression near the base in front of the scutellum; elytra broader than the thorax, rather short, convex in front, depressed in the middle at the base, the sides sinuate, very finely and closely punctured, with large, scattered, subtriangular, shallow depressions or wrinkles behind the middle and along the sides, near the apex on each side, a little distant from the

suture, a short, prominent, rounded elevation forming the termination of the marginal carina, which turns inwards a little before the apex. Beneath very closely and finely punctured.

Length 12½–14 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Capulalpam, Las Peras, Juquila (*Sallé*), Almolonga, Misantla, Jalapa, and Mexico city (*Höge*).

This is one of the most distinct species of the genus, and known by its short, broad, convex form, bright metallic colour, and the strongly wrinkled elytra, the apices of which are apparently emarginate. In most collections, and often labelled *E. plicatus*, Dej., and *E. apicalis*, St.; it seems to be not uncommon in Mexico. *E. rugosus*, Cast., from Brazil, to judge from the description, must be allied to this.

21. **Epitragus inæqualis.**

Oblong ovate, convex, brassy with a cupreous tinge, clothed with short, scattered, cinereous appressed hairs. Head finely, closely, and equally punctured, epistoma a little produced triangularly in front; prothorax a little broader than long, the sides almost straight, obliquely narrowing from the base, the front angles acute and prominent and directed forwards, the hind angles acute, the base bisinuate, and with a shallow impression in front of the scutellum, and a short transverse impression in the middle on each side just within the margin, the disc with a shallow sinuous impression on each side near the middle, very finely and sparingly punctured; elytra convex, a little broader than the thorax, closely and finely punctured, the sides and apical half with large irregular transverse or oblique shallow triangular impressions or wrinkles, and near the apex on each side, a little distant from the suture, a short sinuous elevation, the space between which and the suture concave.

Length 11–12 millim.

Hab. Mexico, Misantla and Almolonga (*Höge*).

Two examples. Allied to *E. plicatus*, but narrower, and the margin of the elytra not toothed near the apex.

22. **Epitragus micans.**

Oblong ovate, convex, bright metallic brass, the thorax cupreous, clothed with coarse, scattered, ashy pubescence. Head closely and rather coarsely punctured, the epistoma convex, and produced and rounded in front; prothorax transverse, convex in front, slightly rounded at the sides, narrowing from the base, the anterior angles not prominent, obtuse, the hind angles not produced, slightly pointed, the base strongly bisinuate, closely and somewhat coarsely punctured, with a slightly raised smooth central line, and a short longitudinal impression in the middle at the base; elytra a little broader than the thorax, short, rather broad behind, sparingly, distinctly, and somewhat coarsely punctured.

Length 12 millim.

Hab. Mexico, Chiapas (*Sallé*).

One example. Of the size and general form of *E. plicatus*. Broader and more convex than *E. metallicus* (♀), the pubescence coarser and more scattered, the anterior angles of the thorax obtuse and not prominent, &c.

23. **Epitragus guatemalensis.**

Oblong ovate, convex, bright brassy æneous, clothed with scattered, coarsish, ashy pubescence. Head broad, convex, closely and rather coarsely punctured, the epistoma broad, convex, produced and rounded in front;

prothorax transverse, convex in front, narrowing from the base, the sides a little rounded, the angles a little prominent and subacute, the base strongly bisinuate, closely and somewhat coarsely punctured, with a smooth, slightly raised, central line, which is slightly impressed before the base, the base with an indistinct oblique impression (sometimes obsolete) on each side just within the margin; elytra wider than the thorax, somewhat parallel, the sides but little rounded, finely, distinctly, but not very closely punctured, with shallow, indistinct grooves, more distinct towards the apex than at the base.

Length 11½–12½ millim.

Hab. British Honduras, Rio Sarstoon (*Blancaneaux*); Guatemala (*Sallé*), Chinautla, Aceituno, Guatemala city (*Salvin*), Dueñas, Cerro Zunil, Ostuncalco, Capetillo, Quezaltenango, Totonicapam (*Champion*); Costa Rica (*Van Patten*).

A common species in Guatemala. Labelled *E. chevrolati*, Haag, in the Sallé collection. This species may be known by its bright metallic brassy colour, coarse scattered pubescence, the short transverse thorax, the elytra but little rounded at the sides, and the distinct punctuation. In some examples the elytra are smoother and more sparingly punctured than in others.

24. Epitragus aurichalceus.

Ovate, bright brass with a cupreous tinge, densely clothed with brownish-yellow pubescence. Head very closely and finely punctured (the space between the eyes smoother), the epistoma produced and rounded in front; prothorax transverse, narrowing from the base, the sides a little sinuate and almost straight, the anterior angles obtuse and not produced, the anterior margin almost straight, the hind angles not very prominent, subacute, the base bisinuate, closely but not very finely punctured, with a smooth central line; elytra much broader than the thorax, rather short, very finely and closely punctured, the apices rounded, slightly flattened in the middle near the base.

Length 11½ millim. (♀.)

Hab. Mexico, Guanajuato, Oaxaca (*Sallé*).

Two examples. Labelled *E. mus*, Haag, in the Sallé collection. Allied to *E. chevrolati*, but smaller, the head smaller and more finely punctured, the epistoma less convex, the thorax comparatively narrower, the apices of the elytra rounded. In the example from Guanajuato (a female) the elytra are more sparingly punctured and shallowly grooved, and the thorax is impressed in the middle at the base.

25. Epitragus æratus.

Oblong ovate, brassy with a cupreous tinge, rather dull, somewhat densely clothed with fine yellowish-brown pubescence. Head very closely, finely, and confusedly punctured, the epistoma produced and rounded in front; prothorax transverse, not very convex, the sides rounded and narrowing in front, widest a little before the base, anterior margin almost straight, anterior angles subacute and scarcely produced, hind angles rectangular, the base bisinuate, very closely, finely, and confusedly punctured, almost rugulose; elytra wider than the thorax, rather broad behind, very closely and finely punctured, the base, sides, and apex still more closely and confusedly punctured, towards the apex with some fine raised points or granules.

Length 11 millim.

Hab. Mexico, Jalapa (*Höge*).

One example. Near *E. aurichalceus*, but with the thorax more transverse, rounded at the sides, and more closely punctured (almost rugulose).

26. **Epitragus parviceps.**

Oblong ovate, convex, bright brassy æneous, densely clothed with fine cinereous pubescence. Head small, finely and closely punctured, the epistoma produced and rounded in front; prothorax a little broader than long, narrowing from the base, the sides slightly rounded, the anterior angles produced though scarcely acute, hind angles not prominent, subrectangular, the base feebly bisinuate, feebly and very closely punctured, with a fine smooth central line which is obsolete in front; elytra a little broader than the thorax, convex, a little rounded at the sides, finely, evenly, and very closely punctured, with indistinct traces of shallow dorsal grooves.

Length 10 millim.

Hab. Mexico, Oaxaca (*Sallé*).

One example. Resembling a small male *E. metallicus*, but more finely and closely punctured, the head smaller, and the lateral lobes not prominent, the angles of the thorax less prominent, &c.; narrower than *E. aurichalceus*, the elytra proportionately much narrower.

27. **Epitragus canus.**

Oblong ovate, light æneous, densely clothed with fine cinereous pubescence. Head very closely and somewhat coarsely punctured, the epistoma produced and rounded in front, the vertex with some coarse long hairs; prothorax a little broader than long, narrowing from the base, the sides nearly straight, the angles rather prominent and subacute, the base strongly bisinuate, and the margin interrupted on each side about the middle by an oblique impression, finely and rather closely punctured, with a smooth, distinct, central line; elytra broader than the thorax, extremely finely and closely punctured; the outer apical angle of the anterior tibiæ produced into a short blunt tooth.

Length $12\frac{1}{2}$ millim.

Hab. Mexico (*Sallé, ex. coll. Sturm*).

One example. Labelled *E. canus*, Haag (*plumbeus*, Dej.), in the Sallé collection.

28. **Epitragus pilosus.**

Oblong ovate, very convex, reddish brown with a greenish tint, densely clothed with rather long, cinereous, appressed hairs. Head sparingly and coarsely punctured, the epistoma convex, rounded and produced in front; prothorax transverse, convex, widest about the middle, the sides nearly straight behind and rounded in front, the angles not prominent, though acute, rather coarsely and closely punctured, with a smooth central line which is slightly impressed before the base, the base bisinuate, and with a slight oblique impression on each side just within the margin; elytra broader than the thorax, convex, rounded at the sides, closely and rather coarsely punctured, the apices somewhat pointed, the pubescence arranged in indistinct rows.

Length 12 millim.

Hab. Mexico, Vera Cruz (*Sallé*).

One example. Labelled *E. pilosus*, Chev., in the Sallé collection. Not very closely allied to any of the other species here recorded, and known by its convex form, and densely pubescent surface; and the pubescence of the elytra arranged in rows.

29. **Epitragus cupreus.** (Tab. I. fig. 24.)

Oblong ovate, convex, varying in colour from bright brassy æneous to dark bronze, when fresh covered with fine, scattered, cinereous pubescence. Head closely and finely punctured, the epistoma rather convex, and produced and rounded in front; the labrum long and prominent, excavated within; prothorax a little

broader than long, convex in front, narrowing from the base, the sides rounded and a little sinuate towards the angles, the anterior angles acute, though not prominent, the hind angles prominent and acute, somewhat coarsely and closely punctured, with a smooth central line which is slightly impressed at the base, the base strongly bisinuate; elytra rather long and convex, somewhat pointed behind, a little wider than the thorax, closely, confusedly, and rather coarsely punctured, with indistinct rows of coarser impressions, the apices slightly mucronate; femora and tibiæ red or reddish brown, the knees and tarsi darker, in some examples the femora are bright red.

Length 12–15 millim.

Hab. GUATEMALA, Tocoy, Cerro Zunil, San Gerónimo, Zapote, San Isidro, Dueñas, El Reposo, Volcan de Atitlan (*Champion*); NICARAGUA (*Sallé*), Chontales (*Belt*); COSTA RICA (*Van Patten*), San Francisco (*Rogers*).

A common species in Guatemala, becoming rarer southwards. Larger and longer than *E. guatemalensis*; the thorax longer, more convex, more rounded at the sides, and more closely and coarsely punctured; the elytra somewhat pointed behind, and the legs red. Dark varieties occur in which the punctuation of the thorax and elytra is finer and more scattered. Labelled *E. cupreus*, Dej., in the Sallé collection.

30. **Epitragus lucidus.**

Oblong ovate, convex, bright brassy æneous, sparingly clothed with fine cinereous pubescence. Head finely and very closely punctured, almost rugulose, the epistoma produced and rounded in front; prothorax broad, a little broader than long, very convex, strongly rounded at the sides, widest a little before the base, narrowing a little in front, the anterior angles slightly produced, triangular, and scarcely acute, the hind angles not produced, straight, and subacute, the base strongly bisinuate, closely and finely punctured, with a fine, smooth, central line which is slightly impressed before the base; elytra broader than the thorax, rather short, rounded at the sides, somewhat pointed behind, very closely, finely, and confusedly punctured, with indistinct shallow dorsal grooves.

Length 12–12½ millim.

Hab. MEXICO, Ventanas, Presidio (*Forrer*).

Two examples. This species may be known by its comparatively broad convex thorax, the sides of which are strongly rounded. Allied to *E. cupreus*, *plumbeus*, &c.

31. **Epitragus obovatus.**

Reversed ovate, convex, dark greenish bronze, rather dull. Head very closely and rather coarsely punctured, almost rugulose, the epistoma convex, produced and rounded in front, the eyes with a fine supraorbital carina, the labrum prominent, excavated within; prothorax a little broader than long, convex in front, the sides rounded and narrowing from the base, the front angles not prominent, obtuse, the hind angles rectangular, the base bisinuate, and with a feeble oblique impression on each side just within the margin, closely and rather coarsely punctured, almost rugulose, with a smooth central line: elytra broader than the thorax, broadest behind the middle, closely and rather coarsely punctured, the punctuation finer and more scattered towards the apex, with shallow grooves.

Length 14½ millim.

Hab. MEXICO, Tehuantepec (*Sallé*).

One example. A large convex species, greenish bronze in colour, almost obovate in form; the upper surface comparatively coarsely punctured, and scarcely pubescent.

32. **Epitragus pruinosus.**

Epitragus pruinosus, Horn, Revis. Ten. N. A. p. 264 (1870)[1].

Hab. North America, Owen's Valley in California [1], Arizona [1].—Mexico, Northern Sonora (*Morrison*).

33. **Epitragus plumbeus.**

Epitragus plumbeus, Lec. New Sp. 375, p. 109[1]; Horn, Revis. Ten. N. A. p. 270 (1870)[2].

Hab. North America, Kansas [1], Trans-Mississippi region [2].—Mexico, Northern Sonora (*Morrison*).

34. **Epitragus godmani.** (Tab. I. fig. 25.)

Oblong ovate, convex, brownish bronze, shining, scarcely pubescent. Head somewhat coarsely and sparingly punctured, the eyes carinated within, the epistoma a little produced and rounded in front, the lateral lobes a little divergent and prominent; the labrum long, not transverse, prominent, concave within; prothorax transverse, the sides rounded, a little sinuate before the angles, and narrowing a little from the base, the angles acute though not prominent, the base bisinuate, sparingly, equally, and rather coarsely punctured; elytra long, convex, somewhat pointed behind, wider than the thorax, with regular rows of coarsish punctures, the interstices finely, confusedly, and not very closely punctured, the apices a little divergent and mucronate. Beneath shining; the prosternal process pointed at apex, the sides of which (between the coxæ) are raised.

Length 10–12½ millim.

Hab. Panama, Bugaba, La Caldera, Volcan de Chiriqui (*Champion*).

A common species in Chiriqui, and known by its shining almost glabrous surface. Allied species occur in Colombia and Brazil.

35. **Epitragus communis.**

Oblong ovate, rather narrow and convex, dark brownish bronze, rather shining, with fine, scattered, cinereous pubescence. Head with the front and vertex closely and finely, the space between the eyes sparingly and coarsely, punctured, the epistoma produced and rounded in front, the lateral lobes divergent; prothorax broader than long, convex in front, the sides rounded and narrowing from the base, the anterior angles not prominent, obtuse, the hind angles acute and outwardly directed, coarsely and not very closely punctured; elytra long, convex, somewhat pointed behind, the apices slightly divergent and pointed, with regular rows of coarsish punctures, the interstices rather coarsely and closely punctured; prosternal process impressed on each side, the apex rounded.

Length 10–11½ millim.

Hab. Mexico (*coll. F. Bates*), Playa Vicente, Cordova (*Sallé*), Oaxaca, Jalapa, Cerro de Plumas (*Höge*); British Honduras, Rio Hondo (*Blancaneaux*), Belize (*coll. F. Bates*); Guatemala, Teleman (*Champion*).

This appears to be a widely distributed species, and common in Mexico. It may be known from *E. godmani*, by the thorax being more rounded at the sides and more coarsely punctured, and by the rather more pubescent surface. Labelled *E. communis*, Chev., in the Sallé collection.

TYDEOLUS.

Tydeolus, F. Bates in litt.

Closely allied to *Schœnicus*. Head broad, short, the eyes not carinated within, front feebly trilobed, the epistoma a litttle produced and rounded in front, labrum almost hidden; prothorax strongly rounded at the sides, narrowed in front and behind; elytra rather short, convex, rounded at the sides, a little more than twice the length of the thorax; anterior tibiæ a little curved, widened on the inner side from the apex to beyond the middle, then suddenly narrowed to the base, the outer apical angle not acute, almost rounded; legs rather short; tarsi with short spiny hairs beneath; prosternum rounded and declivous behind; mesosternum simple.

Three Mexican species at present constitute this genus. Of a different facies from any of the Epitraginæ known to me. May be known from *Schœnicus* by the structure of the anterior tibiæ, the strongly rounded sides of the thorax, broader head, shorter form, and black colour; the anterior tibiæ are apparently thickened in both sexes.

1. Tydeolus atratus.

Tydeolus mexicanus, F. Bates in litt.

Oblong ovate, convex, black. Head coarsely and closely punctured; prothorax transverse, convex, strongly rounded at the sides, narrowed in front and behind, widest about the middle, front angles obtuse and not produced, almost rounded, feebly sinuate at the sides just before the subacute hind angles, base strongly bisinuate, very closely, evenly, and finely punctured; elytra convex, a little wider than the thorax, rounded at the sides, the shoulders rounded, closely, evenly, and rather coarsely punctured, with scarcely any trace of striæ.

Length $7\frac{1}{2}$–$8\frac{1}{2}$ millim.

Hab. Mexico (*coll. F. Bates*), Puebla (*Sallé*).

Four examples.

2. Tydeolus tibialis.

Oblong ovate, rather convex, black with an æneous tinge. Head coarsely and closely punctured; prothorax transverse, convex, rounded at the sides, narrowed in front and behind, widest in the middle, anterior angles obtuse and almost rounded, sides nearly straight (not sinuate just before the base), hind angles rectangular, base strongly bisinuate, anterior margin almost straight, very closely, evenly, and finely punctured; elytra wider than the thorax, rather convex, rounded at the sides, closely, evenly, and rather coarsely punctured, with indications of obsolete striæ.

Length 8–9 millim.

Hab. Mexico (*coll. F. Bates*).

Three examples. Closely allied to *T. atratus*, but not so black, the thorax less rounded at the sides and not sinuate just before the base, and the elytra a little more closely punctured.

3. Tydeolus singularis.

Oblong ovate, convex, pitchy black with an æneous tinge. Head coarsely and closely punctured; prothorax broad, transverse, convex, strongly rounded at the sides, narrowed in front and behind, widest in the middle, anterior angles obtuse and almost rounded, the sides feebly sinuate before the rectangular slightly prominent hind angles, base bisinuate, very closely, evenly, and finely punctured; elytra a little broader

than the thorax, convex, rounded at the sides, closely, evenly, and rather coarsely punctured, with shallow but distinct grooves, the punctures not arranged in rows.

Length 9½ millim.

Hab. Mexico, Tehuacan (*Höge*).

One example. Larger, broader, and more convex than either *T. atratus* or *T. tibialis*.

Group **ZOPHERIDES.**

Two genera (*Zopherus* and *Nosoderma*) represent this group in Central America; the former is peculiar to the New World, and has no very near ally; the latter is perhaps restricted to the Neotropical Region.

ZOPHERUS.

Zopherus, Castelnau, Hist. Nat. ii. p. 205 (1840); Sol. Ann. Soc. Ent. Fr. 1841, p. 39; Lac. Gen. Col. v. p. 91; Horn, Trans. Ent. Soc. Phil. (1867) p. 159.

This genus has its head quarters in Central America, and most of the finest species are peculiar to that country; one (*Z. chiliensis*) extends from Yucatan into South America—to Colombia and Venezuela; several small black species (*Z. tristis*, *concolor*, *guttulatus*, *opacus*, and *gracilis*) are found in New Mexico, Arizona, Texas, &c.; one (*Z. haldemanni*, Horn) in Texas and Northern Mexico; and one (*Z. elegans*) of which the locality was not mentioned by the describer. Some of the North-American species may eventually be found in Northern Mexico. The different species frequent dry elevated districts, and desert regions, and are found under loose bark, logs, fallen trunks of cacti, &c.; and sometimes crawling on stumps in the dry season. One species is known to the natives of Guatemala by the name of "cameleon." They are said to live a very long time without food, and living examples have been exhibited at the meetings of the Entomological Society in London, and also in Paris. The species are difficult to separate, and one or two have been described on insufficient material, upon single examples; abraded or greasy individuals are rather deceptive; the number and arrangement of the tubercles of the elytra and thorax is subject to variation, and often different on one side from the other.

Sect. 1. *Elytra bituberculate at the apex.*

1. Zopherus chiliensis.

Zopherus chiliensis, Gray, Griff. Anim. Kingd. p. 796, t. 124. f. 3 (1832)[1].

Zopherus bremei, Guer. Rev. Zool. 1844, p. 18; Brême, Ann. Soc. Ent. Fr. 1844, p. 307, t. 9. f. 2[2].

Hab. Mexico[1], Yucatan (*coll. F. Bates*), Progreso in Yucatan (*Höge*), Valladolid in Yucatan (*Gaumer*); Guatemala; Salvador; Nicaragua (*Sallé*), Chontales (*Belt*, *Janson*). —Colombia[2]; Venezuela (*coll. F. Bates*).

This, the finest species of the genus, is found in dry elevated districts; it has not yet been received from Costa Rica, or the State of Panama, nor has it ever been taken in Chili.

2. Zopherus mexicanus.

Zopherus mexicanus, Sol. Ann. Ent. Soc. Fr. x. p. 44 (1841)[1]; Gray, Griff. Anim. Kingdom, Append. p. 796, t. 50. f. 5 (1832)[2]; Hope, Dej. Cat. 3rd ed. p. 207 (descr. nulla)[3].
Zopherus jourdani, Sallé, Ann. Ent. Soc. Fr. 1849, p. 301, t. 8. f. 4[4].

Hab. Mexico[1 2 3] (*coll. F. Bates*), Chiapas (*Sallé*); British Honduras, Rio Sarstoon (*Blancaneaux*); Guatemala (*Sallé*)[4], Aceituno (*Salvin*), Panajachel, Godines, Calderas, Capetillo (*Champion*); Nicaragua (*Sallé*).

This is a pretty common species in the drier parts of the highlands of Guatemala, and found under loose bark, &c., and often crawling on stumps during the dry season. I adopt the name of *Z. mexicanus*, Sol.; the description of *Z. mexicanus*, Gray, would apply equally well to any of the black and white species. *Z. jourdani*, Sallé, is identical with this, and is indeed so labelled in the Sallé collection. Mexican specimens sometimes differ a little from those from Guatemala in having the rows of tubercles on the elytra larger and more irregular; but in a long series of specimens intermediate forms will be found.

3. Zopherus jansoni. (Tab. II. fig. 2.)

Zopherus jansoni, F. Bates in litt.

Head dull black, with a large triangular white patch extending nearly to the anterior margin and spotted with black in the middle; prothorax convex, sides strongly trisinuate and crenulate towards the base, base subtruncate, yellowish white spotted with black, the spots larger and often confluent on the disc and smaller and more distinct towards the sides, with a large oblique black spot at the base on each side; elytra moderately convex, base deeply emarginate and with the margin raised, shoulders produced in front and the angles raised, yellowish white, with rows of large smooth flattened black elevations or spots arranged thus—a row of about four or five very large and subtriangular in shape, a row similar of three or four, a row (often obsolete) of two or three smaller, and a marginal row small of about five, the spaces between the spots with scattered smaller irregular elevations, the spots along the suture more regularly arranged and increasing in size towards the base, the large spots of the first two rows more or less connected by a longitudinal white line or band, apex bituberculate. Beneath dull black; margins of the head, thorax, meso- and metasternum, and ventral segments broadly marked with yellowish white spotted with black; ventral segments with a few scattered shallow punctures, ventral callosity but little prominent, the anterior margin of which bisinuate, flanks of the prothorax with a few small scattered tubercles. Length 21–25 millim.

Hab. Nicaragua, Chontales (*Belt, Janson*); Costa Rica (*Van Patten*), Irazu (*Rogers*).

This species is allied to *Z. mexicanus*, Sol., but is smaller, narrower, and not so convex; it is more densely clothed with white (especially beneath) than its allies; the elytra have only two distinct rows of large spots, which are usually placed upon [or connected by] longitudinal white lines or bands, the base is strongly emarginate, and the shoulders very prominent.

4. **Zopherus costaricensis.** (Tab. II. fig. 1.)

Head dull black, with a few scattered punctures, and marked with white along the sides and between the eyes; prothorax convex, sides strongly bisinuate and crenulate before the base, base subtruncate, yellowish white, the disc darker, the sides sparingly, and the disc closely, covered with small flattened black tubercles or spots, with an interrupted central white line, and the disc with a transverse or rounded spot on each side before the middle, the anterior margin in the middle marked with black, and the base with a large oblique black spot on each side; elytra long, convex, base emarginate and the margin raised near the shoulders which are a little produced, yellowish white, with rows of flattened black tubercles or spots arranged thus—a sutural row small and pretty regular, a row of four or five rounded large and prominent, a row of three or four similar wider apart, and a marginal row smaller of five to seven, between the rows of large spots are rows of smaller ones closely crowded together, the spots in the second and third rows connected by a longitudinal white band, apex bituberculate. Beneath black, slightly shining; margins of the head, thorax, meso- and metasternum, and ventral segments marked with yellowish white spotted with black; flanks of the thorax with numerous rounded tubercles; ventral segments with scattered punctures; the whole of the under surface with small scattered indistinct raised spots or tubercles; ventral callosity prominent, emarginate, and with a protuberance in the centre in front.

Length 27–34 millim.

Hab. Costa Rica (*Sallé, Van Patten*), Irazu, Cache, Rio Sucio, San Francisco 4500 feet (*Rogers*).

I have only seen this species as yet from Costa Rica. Larger than *Z. jansoni*, the under surface and the thorax above not so smooth and more tuberculate, the shoulders of the elytra not so prominent or produced, more convex, the longitudinal white bands (connecting the rows of large tubercles) on the elytra more distinct, the sutural row of elevations stronger, the flanks of the thorax much more closely and coarsely tuberculate. From *Z. mexicanus* it may be known by the different arrangement of the elevations or spots of the elytra, those of the second and third rows are stronger and less numerous, and of the interstices smaller and more crowded and collectively arranged in three broad rows, which are separated one from the other by the broadish white bands upon which the larger prominent elevations are placed.

5. **Zopherus lævicollis.**

Zopherus lævicollis, Sol. Ann. Soc. Ent. Fr. (1841) p. 46[1].

Hab. Mexico[1] (*coll. F. Bates*), Mexico city (*Höge*), San Antonio de Arriba (*Sallé*), San Miguelito (*Dr. Palmer*).

Var. **venosus.**

Head black, slightly shining, with scattered rather coarse punctures, and a small triangular white occipital spot; prothorax broad, convex, sides trisinuate and crenulate before the base, white, with small flattened black tubercles or spots, the disc with a black patch about the middle and towards the anterior margin bare and shining leaving a broad black transverse patch in front, the base subtruncate and with a large triangular black spot on each side, with a few scattered impressions closer and more distinct near the anterior margin; elytra convex, base slightly emarginate, shoulders distinct, white, with rows of flattened black tubercles arranged thus—a sutural row of about fifteen to eighteen small and rather regular, a row large and rounded of about eight, a row similar of about seven, a row a little smaller and wider apart of about six, and a marginal row smaller of six or seven, between the rows are scattered smaller spots, apex

bituberculate. Beneath black, shining, with scattered coarsish punctures, which are finer and closer together towards the last ventral segments, ventral callosity emarginate and with a large rounded swelling in the centre in front; flanks of the thorax with a few large coarse impressions.

Length 17–23 millim.

Hab. Mexico (*coll. F. Bates*), Juquila, Parada, Capulalpam (*Sallé*), Mexico city (*Höge*).

This is probably not distinct from *Z. lævicollis*, a species described by Solier from a single worn example. The description is from a beautiful fresh specimen, in the Sallé collection, from Juquila; others from Parada, Capulalpam, and Mexico city are intermediate and with the tubercles of the elytra more irregular, but arranged in more or less distinct rows; the sculpture of the upper surface of the thorax varies a great deal, and cannot be relied upon as a specific character; the ventral tubercle is trilobed in front in all the specimens I have examined. The examples I refer to *Z. lævicollis* are much abraded (apparently), and almost entirely black and shining; the thorax in some specimens is smooth, in others with small flattened tubercles and a few scattered impressions; the elytra with coarse irregular elevations, often more or less confluent, or in the form of transverse wrinkles. In the long series of specimens before me intermediate forms are to be found.

6. Zopherus tuberculatus. (Tab. II. fig. 3.)

Head dull black, with a triangular white occipital patch; prothorax convex, the sides very feebly trisinuate (almost rounded before the middle) and finely crenulate towards the base, white, the disc with a broad black patch extending from the base to the anterior margin [the white colour extending a little inwards about the middle], and some scattered black spots towards the sides, almost smooth except for a few indistinct flattened tubercles on the disc and some scattered fine punctures, base subtruncate and the margin punctured; elytra of an elliptic form, convex, white, with five regular rows of flattened black tubercles arranged thus—a sutural row small running one into the other towards the base, separate at apex, a row of about eight larger and almost touching the sutural row, a row of about seven the same size, a row similar, and a marginal row small of about eight or nine, the third and fourth rows with the spots wider apart and more distinct one from the other, the spaces between the tubercles with small black spots, the shoulders prominent, apex bituberculate and the tubercles flattened and not very prominent. Beneath black, slightly shining, with scattered punctures finer towards the last ventral segment, ventral callosity produced in the centre of the anterior margin.

Length 20 millim.

Hab. Mexico, Tehuantepec (*Sallé*).

One example. Allied to *Z. lævicollis*, but longer, not so convex, thorax proportionately broader at the base; the tubercles are flatter and less raised, though prominent, than in the allied species.

7. Zopherus maculatus.

Head dull black, with a triangular white spot between the eyes; prothorax convex, sides trisinuate and crenulate towards the base, white, with scattered small black spots and with four ill-defined larger ones on the disc—one at the base extending forwards, one near the anterior margin, and one on each side near the middle; elytra rather convex, shoulders prominent, white, with rows of black tubercles arranged thus—a

sutural row small and crowded and distinct only towards the base, a row much larger of three or four, a row similar, and a marginal row small of about six pretty regular, the spots in the second and third rows irregularly arranged, a few scattered small black spots between the larger ones, apex bituberculate. Beneath dull black, not shining, hind margin of the ventral segments indistinctly marked with white on each side and the surface with a few fine punctures equally distributed, ventral tubercle feebly bisinuate in front.

Length 17–18 millim.

Hab. Mexico (*coll. F. Bates*).

Two examples. Allied to *Z. venosus* and *lævicollis*, but shorter and more convex, the arrangement of the tubercles of the elytra is rather different from any of the allied species, the sutural row is distinct only in the basal half, the two rows of large tubercles approach the suture behind, and the inner one almost takes the place of the sutural row; the ventral tubercle (though scarcely to be depended on as a character) is not trilobed in front as in the allied species.

8. **Zopherus angulicollis.** (Tab. II. fig. 6.)

Black, subopaque. Head very sparingly punctured; thorax with fine widely scattered punctures, moderately convex, rather depressed, with an indistinct central channel, sides trisinuate and widened out a little before the middle into a distinct blunt tooth, midway between which and the base crenulate, narrowed behind, base much narrower than the apex and subtruncate; elytra oval, convex, much narrowed at base, shoulders rather prominent, base slightly emarginate, with scattered irregular small conical shining tubercles more distinct at the sides and apex than at the base and an indistinct row of flattened tubercles along the suture, the space between the tubercles dull and opaque, apex bituberculate and with the tubercles very large and flattened. Beneath dull black, ventral segments with scattered fine punctures, the last with a prominent transverse callosity the anterior margin of which slightly produced in the centre; mentum with a deep transverse impression.

Length 17 millim.

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

One example only. Allied to *Z. guttulatus*, Horn.

Sect. 2. *Elytra 4-tuberculate at the apex.*

9. **Zopherus nodulosus.**

Zopherus nodulosus, Sol. Ann. Soc. Ent. Fr. (1841) p. 43[1].

Zopherus variolosus, Sturm, Cat. 1843, p. 349, t. 5. f. 2; Hald. Stansb. Expl. p. 376 (1852).

Hab. Mexico[1], Jalapa, Orizaba (*Sallé*), Juquila, Jalapa (*Höge*), Oaxaca (*coll. F. Bates*).

Var. **sallæi.**

Zopherus sallæi, Deyr. in litt.

Proportionately a little shorter and more convex than *Z. nodulosus*; the elytra more rounded at the sides, the elevations more numerous and crowded, and towards the suture only separated by thin white lines.

Length 14–27 millim.

Hab. Mexico (*coll. F. Bates*), Orizaba, Capulalpam, Oaxaca (*Sallé*).

This is the commonest *Zopherus* in Mexico, and peculiar to that country; it has

been recorded from Texas, but in mistake; Texan specimens are referable to *Z. haldemanni*, Sallé, as pointed out by Dr. Horn (Rev. Ten. N. A. p. 27). The type of *Z. variolosus*, Sturm, contained in the Sallé collection, is identical with this species. The var. *sallæi* is not, I think, really distinct from *Z. nodulosus*; intermediate forms occur.

10. **Zopherus haldemanni.**

Zopherus haldemanni, Sallé in litt.; Horn, Ten. N. A. p. 271[1].

Hab. North America, Texas[1].

Var. **verrucosus.** (Tab. II. fig. 5.)

Differs from *Z. haldemanni* in having the thoracic discal patch larger, not so well defined, and with ramifications extending in the middle nearly to the lateral margins; the elevations of the elytra less regularly arranged, a little larger, and occupying more of the white ground-colour.

Hab. Mexico (*coll. F. Bates*), Cuernavaca (*Sallé*).

Almost intermediate between *Z. nodulosus* and *haldemanni*.

11. **Zopherus nervosus.**

Zopherus nervosus, Sol. Ann. Soc. Ent. Fr. (1841) t. 2. f. 8–15[1].
Zopherus pectoralis, Lec. Ann. Lyc. New York, v. 1851, p. 130, nota.
Zopherus mexicanus, Buquet in litt.

Hab. Mexico[1], Tepansacualco, Orizaba, Las Peras, Cumbre del Pelado, Totosinapan (*Sallé*), Oaxaca (*coll. F. Bates*).

Var.? **reticulatus**, Sallé in litt.

Closely allied to *Z. nervosus*, Sol., but having the spots or tubercles of the elytra less crowded, more distinct one from the other, larger, oblong in form, less numerous, and arranged thus—a sutural row small, a row of about five very large, a row of four about same size, a row of three smaller, and a marginal row of five or six, scattered between these are irregular small black spots, smaller than those of the sutural row; the white ground-colour occupying a larger space, and the tubercules, which are oblong in form, standing out more clearly; beneath a little smoother and more shining.

Hab. Mexico, Juquila (*Sallé*).

A very variable species, though it may be known from its allies in the second section, except the following (*compactus*, Sallé), by the flanks of the prothorax being covered with distinct rounded tubercles; the whole of the underside (ventral segments excepted), and the flanks of the elytra beneath, is more or less tuberculate; the shoulders are but little prominent; varies very much in size (18–30 millim.), some specimens are shorter and more convex than others.

12. **Zopherus compactus.** (Tab. II. fig. 4.)

Broad, very convex. Head black, dull, with a few scattered fine punctures, and a yellowish-white triangular occipital spot more or less spotted with black; prothorax very convex, nearly as broad as long, margins

strongly crenulate near the base, closely tuberculate above, the tubercles crowded together and only separated by fine yellowish-white veins or lines, the posterior angles and sides of the thorax margined with yellowish white; elytra short and very convex, rounded at the sides, closely covered with flattened black tubercles arranged thus—a sutural row regular small, a row smaller irregular, two rows very large, a row a little smaller, and a marginal row about same size, between these irregular rows are numerous other small tubercles of the size of those of the sutural row, the spaces between the tubercles filled up with a fine network of yellowish-white colour, shoulders not very prominent, apex quadrituberculate. Beneath black, margins of thorax, meso- and metasternum, and second and third ventral segments marked with yellowish white, flanks of prothorax and elytra closely and coarsely tuberculate, the rest (ventral segments excepted) more or less rough or tuberculate, ventral callosity deeply emarginate in front.

Length 18–27 millim.

Hab. Mexico, Parada, Las Peras (*Sallé*), Oaxaca (*coll. F. Bates*).

Closely allied to, and probably only a form of, the preceding species (*Z. nervosus*, Sol.); shorter and more convex, the thorax and elytra more closely tuberculate, and the tubercles, though more numerous, more distinct one from another. This species bears the name of *compactus*, Sallé, in the Sallé collection, the name I have adopted.

NOSODERMA.

Nosoderma, Solier, Ann. Soc. Ent. Fr. x. p. 31, t. 2. f. 1–3 (1841).
Homaloderes, Sol. loc. cit. iii. p. 502, nota.

This genus is probably confined to the Neotropical Region, ranging from Mexico to Brazil, and occurring also in the West Indies; it is well represented in Central America, whence three or four species have been described; one species is found in Brazil, one in Colombia, and one in Cuba; a number of additional species (about half of which are known in collections) are described here. *Nosoderma*, like *Zopherus*, has its head quarters in Central America, though not occurring north of Mexico, where it is replaced by the closely allied genera *Phellopsis*, *Noserus*, and *Phlœodes*. Allied forms, probably generically distinct, are found in Japan, Siberia, and East Africa; and also (*Zopherosis*) in New South Wales. These insects are difficult to describe in a satisfactory manner; like certain Asidæ the depressions of the upper surface are often filled up with earthy matter, thus disguising the sculpture, and good differential external sexual characters are apparently wanting.

The different species are found under loose bark in the forests, usually at high elevations, and often in very dark damp places; also upon fungoid growths attached to the bark of old stumps or dead standing trees, upon which they remain apparently immovable, and so much do they assimilate the surface upon which they are resting that it is often very difficult to distinguish them.

1. **Nosoderma æquale.** (Tab. II. fig. 14.)

Elongate, depressed, dull black. Head almost smooth; prothorax much longer than broad, widest about the middle, sides rounded and very slightly narrowed at base and in front, base truncate, and as wide as the

elytra, hind angles almost rectangular, finely and equally granulated, with a distinct shallow central channel from base to apex; elytra subtruncate at base, humeral angles rounded and not prominent, sides almost straight to behind the middle, finely and equally granulated without any appearance of raised lines or tubercles, with four or five indistinct rows of shallow impressions towards the base, apices a little produced, equally rounded, and not separate at the suture. Legs black; antennæ pitchy, submoniliform, the apical joint enclosed by the tenth, which is very large and truncate at apex; last joints of palpi red.
Length 20 millim.

Hab. Mexico, Parada (*Sallé*).

One example. This species has quite a different facies from any of the *Nosodermata* known to me.

2. **Nosoderma asperatum.** (Tab. II. fig. 9.)

Elongate, rather convex, black, densely clothed with dull brown scales. Head almost impunctate; prothorax coarsely crenulate at the sides, longer than broad, base produced into a broad lobe, between which and the obtuse hind angles strongly emarginate, anterior angles rounded and prominent, the disc with a prominent sinuous ridge on each side, the ridges sharply defined outwardly by a deep excavation, with scattered, shining black granules; elytra with irregular rows of very prominent scattered elevations, which are conical in form towards the apex, and in the form of short ridges towards the base, the margins and spaces between the elevations with scattered rounded tubercles, the margins much interrupted and with the tubercles angular towards the apex, shoulders obliquely truncate, apices divergent, and each with a prominent tubercle. Beneath with scattered granules or elevations. Antennæ with intermediate joints submoniliform.
Length 12–14 millim.

Hab. Mexico (*Sallé, coll. F. Bates*).

Four examples. Allied to *N. scabrosum*, but shorter in form, a little more convex, the lateral margins of the thorax scarcely sinuous and very coarsely crenulate, the elytral tubercles more conical; the spaces between the larger elevations with scattered, small rounded tubercles.

3. **Nosoderma scabrosum.**

Nosoderma scabrosum, Sol. Ann. Soc. Ent. Fr. x. p. 36[1] (1841).
Nosoderma lacordairei, De Brême in litt.

Hab. Mexico [1], Orizaba (*Sallé*), Jalapa (*Höge*), Oaxaca (*coll. F. Bates*).

4. **Nosoderma denticulatum.**

Nosoderma denticulatum, Sol. Ann. Soc. Ent. Fr. x. p. 33, t. 2. f. 7 (1841)[1].

Hab. Mexico [1].

I cannot satisfactorily identify this species amongst the very large number of Mexican *Nosodermata* contained in the Sallé and other collections; it is probable that one of the species here described will prove eventually to be identical with it.

5. **Nosoderma venustum.** (Tab. II. fig. 7.)

Elongate, dull black, the dense scaly clothing above dull brown with darker brown spots or markings. Head with the lateral margins swollen and raised; prothorax much longer than broad, narrowed towards the

base, front angles produced and rounded, hind angles obtuse, base a little produced and slightly rounded, the disc with a prominent sinuous ridge on each side, the ridges sharply defined outwardly by a deep impression extending to the lateral margin, the surface with fine scattered granules; elytra abruptly narrowed and declivous behind, and the apex produced, the base deeply rounded emarginate, the shoulders prominent, with rows of short elevations towards the base, and some large prominent tubercles towards the apex, the elevations arranged thus—a sutural row indistinct, a row starting from near the shoulder continuing to beyond the middle and ending abruptly in a large rounded prominence, a short interrupted row scarcely reaching the base, and a marginal row ending like the second, but beyond it, in a large rounded prominence, beyond the termination of the second row but nearer the suture is another still more prominent but less rounded prominence, the apices somewhat broadly truncate with a large rounded tubercle on each side distant from the suture, between the elevations are irregular rows of depressions, the surface with fine scattered shining black granules. Beneath light brown, with dark spots or markings and scattered granules. Antennæ stout, with intermediate joints slightly transverse.

Length 20–24 millim.

Hab. Guatemala, Zapote, Volcan de Atitlan (*Champion*).

Two examples. This is perhaps the finest and most distinct species of all the Central-American *Nosodermata*.

6. **Nosoderma lutosum.** (Tab. II. fig. 8.)

Elongate, flat and depressed, dull black, densely clothed with brown earthy-looking scales. Head with the lateral margins slightly raised; prothorax flattened, longer than broad, wide in front, narrowed and sinuate at the sides from the middle to the base, front angles very prominent and broadly rounded, hind angles obtuse, the base slightly rounded, with two short ridges at the base, and two similar ridges near the anterior margin, divided by a smooth, shallow, central line or channel, the disc with a strong curved elevation on each side well defined externally by a deep impression, the surface and lateral margins with small, widely scattered, rounded elevations, the margins appearing coarsely crenulate; elytra for more than half their width and for about two thirds of their length flattened and slightly concave, abruptly declivous behind, and the apex produced, with irregular rows of elevations and depressions, a sinuous row of larger elevations starting from the shoulder and ending some distance before the apex in a rough prominent tubercle, and a marginal row similar, but ending before it, the apices broadly truncate, and each with two rounded tubercles—one near the suture and the other on the margin. Beneath brown with paler markings and some scattered shallow impressions; ventral segments broadly flattened and slightly concave down the middle. Antennæ with intermediate joints almost transverse.

Length 16–19 millim.

Hab. Mexico (*coll. F. Bates*), Orizaba (*Sallé*), Jalapa (*Höge*).

7. **Nosoderma zunilense.** (Tab. II. fig. 10.)

Elongate, depressed, dull black, densely clothed with dark brown scales. Head with lateral margins raised and prominent; prothorax much longer than broad, broad in front, narrowed from about the middle to the base, the sides bisinuate, base broadly but feebly rounded, rather flattened, the disc longitudinally convex and with a not very prominent sinuous ridge (sharply defined externally by a deep impression) on each side near the middle, the surface with fine scattered granules; elytra flattened for about two thirds of their width to some distance beyond the middle, then abruptly declivous to the apex, with rows of long deep impressions, and two interrupted raised lines or elevations—the first represented by a short rounded elevation at the base and becoming obsolete beyond the middle, the second not reaching the base and terminating some distance before the apex in a very prominent rounded elevation, a little beyond the elevation terminating the second row, but on the lateral margin, is another large projecting subtriangular elevation, shoulders obliquely truncate, apices a little produced and separately rounded, the surface with small scattered granules a little more prominent than on the thorax. Beneath dull black, sparingly

clothed with dark brown scales, and with scattered rather coarse granules; the ventral segments more finely and sparingly granulate. Antennæ with intermediate joints submoniliform.
Length 18–22 millim.

Hab. GUATEMALA, El Tumbador, Cerro Zunil (*Champion*).

Four examples.

8. **Nosoderma guatemalense.** (Tab. II. fig. 11.)

Moderately elongate, depressed, dull black, clothed with dark brown scales, the surface, except the head, with scattered shining granules. Head with the lateral margins a little raised and rounded; prothorax a little longer than broad, widest about the middle, a little narrowed in front and behind, anterior angles not very prominent and broadly rounded, hind angles obtuse, base subtruncate, depressed towards the sides, the disc longitudinally convex, in some examples with a sinuous transverse elevation on each side starting from about the middle and extending to the lateral margins, and often well defined behind by a large, deep, triangular impression; elytra flattened for about two thirds of their width to some distance beyond the middle, with a series of ridges ending in more or less prominent rounded elevations towards the apex, the ridges arranged thus—one sutural extending to the apex, one indistinct prominent only at the base, one more distinct than the others starting from near the shoulder and ending abruptly in a rounded elevation, one short not reaching the base, and one marginal, much interrupted, starting from the shoulder and ending a little beyond the termination of the third in a rounded elevation, between these ridges are rows of long deep impressions, the apices a little produced, almost equally rounded, and slightly divergent at the suture, shoulders feebly truncated and almost rounded. Beneath sparingly clothed with dark brown scales, somewhat closely and coarsely granulate. Antennæ with intermediate joints submoniliform.
Length 16–17 millim.

Hab. BRITISH HONDURAS, Rio Sarstoon (*Blancaneaux*); GUATEMALA (*Sallé*), Totonicapam, Purula, Chilasco, Calderas, Volcan de Fuego 6500 feet, San Gerónimo, Dueñas (*Champion*).

This species is not uncommon in Guatemala under loose bark of fallen timber in the forests at elevations of from 4000 to 10,000 feet; it is allied to *N. zunilense*, but shorter, the thorax shorter and narrower in front, the apices of the elytra almost equally rounded and very slightly produced, and the tubercles not nearly so prominent, &c. *N. zunilense* and *guatemalense* have a different facies from the other Central-American species; they are flatter and squarer in form, and have four prominent tubercles only on the elytra towards the apex—one on each side *on* the margin, and the other a little above nearer the suture; the rows of impressions on the elytra are deeper, and the marginal elevation before the apex prominent; the disc of the thorax is longitudinally convex in both species.

9. **Nosoderma interruptum.**

Moderately elongate, rather depressed, dull black, densely clothed with dark brown earthy-looking scales. Head almost smooth; prothorax longer than broad, almost as broad behind as in the middle, a little sinuous before the prominent hind angles, base a little produced and subtruncate, the disc with a prominent, interrupted sinuous elevation on each side, the surface with widely scattered coarse granules; elytra with rows of shallow impressions and sinuous or curved ridges or elevations, the elevations arranged thus—an irregular and interrupted row formed of three short ridges (one starting from the base and curving inwards, followed by another curving outwards, and another shorter and stouter also curving

outwards), a little beyond the termination of this row, but nearer the suture, is a rounded prominent elevation, and a short interrupted marginal ridge distinct only near the base, in addition to these there are towards the sides and apex a few other indistinct or less prominent elevations, the margins from the middle to the apex somewhat coarsely but widely denticulate, apices a little produced and swollen, divergent at the suture, and separately rounded. Antennæ with intermediate joints broader than long.
Length 18–19 millim.

Hab. Mexico, Las Vigas (*Höge*).

Allied to *N. morbillosum*, Sol.

10. **Nosoderma insigne.** (Tab. II. fig. 13.)

Moderately elongate, depressed, dull black, densely clothed with brown scales. Head impunctate; prothorax a little longer than broad, slightly narrowed in front and behind, feebly sinuate at the sides before the prominent obtuse hind angles, the base a little produced and subtruncate, the disc with a not very prominent sinuous ridge on each side, with a central smooth line slightly impressed at the base, the surface with scattered shining granules which are coarser and more numerous near the anterior margin, the space between the ridges smoother and less closely but more coarsely granulate; elytra rather smooth, with some irregular shallow impressions, and a row of short prominent elevations starting from near the shoulder and ending before the apex, and consisting of—a ridge curving inwards starting from the base, another shorter curving outwards, another similar curving inwards, and lastly a small rounded elevation, with a short marginal elevation at the base, and the surface with scattered very fine granules, the base broadly but feebly emarginate, the shoulders rounded, the apices almost rounded and scarcely divergent at the suture.
Length 17 millim.

Hab. Mexico, Capulalpam (*Sallé*).

Two examples. This is allied to *N. interruptum*, and with the elevations of the elytra arranged in the same manner, but is much smoother, the elytral depressions shallower, the elevations shorter and less connected, and the apices almost equally rounded.

11. **Nosoderma morbillosum.**

Nosoderma morbillosum, Sol. Ann. Soc. Ent. Fr. x. (1841) p. 37[1].
Nosoderma inæquale, Dej. in litt.
Nosoderma regale, Klug in litt.
Nosoderma vicinum, Sol. loc. cit. p. 38[2].

Hab. Mexico (*Truqui, coll. F. Bates*), Jacale, Las Vigas, Parada, Yolotepec, Orizaba (*Sallé*), Jalapa, Mexico city, Las Vigas (*Höge*), Ciudad in Durango 8100 feet (*Forrer*); ? Guatemala (*Sallé*).

This is a common species in Mexico, where Höge found it in great plenty; one specimen only in the Sallé collection is labelled Guatemala, perhaps erroneously. The *N. vicinum*, Sol., is a small and narrow form of this species.

12. **Nosoderma carinatum.**

Moderately elongate, rather depressed, dull black, clothed with dark brown scales. Head rather smooth; prothorax longer than broad, narrowed in front and behind, sides slightly sinuate before the base, hind angles prominent and obtuse, the disc with a sinuous prominent elevation on each side, the surface with

coarse, shining, black granules, crowded on the elevations and at the sides and in front, the space between the elevations usually clearer, with a central smooth line distinct at the base, the base slightly produced, subtruncate; elytra with prominent raised lines and elevations, and rows of shallow impressions, the raised lines arranged thus—a line distinct only towards the apex, starting from the base and ending abruptly beyond the middle in a long, rounded elevation, a line slightly sinuous, prominent, and uninterrupted throughout, starting from the base and ending short of the first, a short line obsolete in front and not reaching the base, and a short marginal line starting from the shoulder and not reaching the middle, some distance beyond the termination of the second line, but nearer the first, is an isolated rounded elevation, sometimes with one or two other smaller elevations a little before the apex, base broadly emarginate, shoulders rounded, the margins closely crenulate, apices rounded, and very slightly divergent at the suture, the surface with coarse scattered granules. Antennæ with intermediate joints longer than broad and submoniliform. Beneath closely and coarsely granulate, fifth ventral segment smoother.

Length 15–20 millim.

Hab. Mexico (*coll. F. Bates*), Orizaba, Jacale (*Sallé*), Las Vigas, Jalapa (*Höge*).

This species is labelled *N. papulosum*, Chev., in the Sallé collection, and is rather common in Mexico. Höge found it in numbers at Jalapa.

Allied to *N. exsculptum*, but with the rows of elevations on the elytra more prominent and less interrupted, the thorax comparatively a little broader behind, and the hind angles more prominent and less obtuse.

13. Nosoderma exsculptum.

Elongate, rather narrow and depressed, dull black, clothed with dark brown scales. Head rather smooth; prothorax much longer than broad, narrowed and sinuate behind, hind angles obtuse, and almost rounded, base a little produced and subtruncate, with a more or less distinct, smooth, central line or channel from base to apex, and the disc with a sinuous (sometimes not very prominent) elevation on each side, the elevations well defined externally by a deep impression, and internally by a smooth sinuous space, the surface with scattered, rather coarse, smooth, black granules, the granules crowded along each side of the central line and on the elevations; elytra with interrupted raised lines or ridges, and some rounded elevations towards the apex, and the intervals with irregular rows of shallow impressions, the elevations arranged thus—an indistinct ridge (more or less interrupted or obsolete towards the base) starting from the base and ending some distance before the apex in a rounded elevation, a ridge (much interrupted behind, but distinct towards the base) starting from near the shoulder and ending before the first in a similar rounded elevation, a short interrupted ridge not reaching the base and ending in a line with the first, and a marginal ridge indistinct, a little beyond the termination of the ridges and in a line with them are one or two rounded elevations, the surface with scattered granules arranged in rows on the elevations, less numerous and irregularly placed in the depressions, the margins towards the apex somewhat coarsely denticulate, the base feebly emarginate, shoulders rounded, slightly impressed transversely before the middle, the apices slightly divergent at suture and separately rounded. Antennæ with intermediate joints submoniliform.

Length 12–21 millim.

Hab. Mexico (*coll. F. Bates*), Jalapa (*Höge*), San Antonio de Arriba, Jacale, Durasnal (*Sallé*).

This is the commonest species of *Nosoderma* in Mexico. Höge captured it in great abundance at Jalapa.

Some very small examples (12 millim. in length) from Durasnal, San Antonio, and Jalapa have the elevations of the elytra more interrupted and prominent, especially towards the apex.

14. **Nosoderma anceps.**

Closely allied to *N. exsculptum*, but comparatively shorter and broader; the thorax shorter, less narrowed towards the base, and the elevations stronger; the margins of the elytra more closely denticulate.
Length 15–22 millim.

Hab. Mexico, Jalapa, Mexico city (*Höge*).

Probably not distinct from *N. exsculptum*, and taken by Höge at the same locality.

15. **Nosoderma impressum.**

Allied to *N. exsculptum*, but broader; the thorax wider in front, more narrowed and sinuous behind, the elevations stronger, the hind angles a little more prominent, the granules coarser, more scattered, and less regularly arranged; the elytra strongly and broadly impressed on each side before the middle, the elevations more interrupted and irregular, those towards the apex stouter and stronger, those towards the base curving inwardly and interrupted by the impressions, the shoulders are slightly truncated obliquely, the apices a little divergent at the suture and separately rounded, the margins towards the apex somewhat coarsely denticulate, the granules a little coarser and more scattered. Antennæ with the intermediate joints longer than the rest and obconic.
Length 17–20 millim.

Hab. Mexico (*coll. F. Bates*), Jacale (*Sallé*).

Five examples. Sometimes labelled *N. denticulatum*, Sol., in collections; it does not agree, however, with the description or figure of that species; it is perhaps a form of *N. exsculptum*.

16. **Nosoderma sparsum.** (Tab. II. fig. 12.)

Elongate, narrow and rather depressed, dull black, sparsely clothed with dark brown scales, the surface (except the head) with scattered, shining, rather coarse granules. Head smooth; prothorax much longer than broad, a little narrowed towards the base, the anterior angles broadly rounded and produced, hind angles slightly prominent and obtuse, base a little produced and subtruncate, the disc with a long sinuous ridge on each side, between which and the lateral margins there is a large shallow impression, the granules on the disc larger, coarser, and more scattered than on the ridges and at the sides, with a smooth central line distinct from the middle to the base, obsolete in front; elytra broadly flattened, the suture raised and with interrupted ridges, only one of which is at all distinct, this starting from the middle of the base ends some distance before the apex in a rounded but not very prominent elevation, the margins a little raised and with a short rounded elevation a little beyond the termination of the dorsal ridge; between the elevations are irregular rows of smooth, shallow impressions, the elevations with fine shining granules closer and more crowded along the suture than towards the sides, shoulders rounded and not prominent, base broadly and feebly emarginate, apices not divergent at the suture, but equally rounded. Antennæ with the ninth joint much broader than the eighth, last joints very broad and rounded at the apex. The thorax beneath coarsely, the meso- and metasternum and ventral segments more finely and closely, granulate; fifth ventral segment smooth, and with a few fine raised points towards the hind margin.
Length 16–19 millim.

Hab. Guatemala, Desconsuelo, Pachoc, Totonicapam (*Champion*).

This species is pretty common under loose bark of fallen pines at elevations of from 8000 to 11,000 feet.

Proportionately longer and narrower than any of the allied species, and the elevations of the elytra less prominent.

Group STENOSIDES.

A few genera of this group are found in Chili, and one in North America; the remainder in the Old World, many species occurring in the south of Europe.

ARÆOSCHIZUS.

Aræoschizus, Leconte, Ann. Lyc. New York, v. p. 138; Horn, Revis. Ten. N. A. Trans. Am. Phil. Soc. xiv. p. 274; Lec. & Horn, Class. Col. N. A. p. 366 (1883).

This genus, recorded from California and New Mexico, has lately been received from the north of Mexico just within our boundary; the four recorded species are stated to occur beneath stones in hot, dry, desert regions.

1. Aræoschizus costipennis.

Aræoschizus costipennis, Lec. Ann. Lyc. New York, v. p. 138[1]; Horn, Revis. Ten. N. A. Trans. Am. Phil. Soc. xiv. p. 274[2].

Hab. North America[1 2].—Mexico, Northern Sonora (*Morrison*).

Group DACODERIDES.

This group consists of a genus peculiar to the Southern United States and to the West Indies.

DACODERUS.

Dacoderus, Leconte, Proc. Acad. Phil. 1858, p. 74; Class. Col. N. A. 1862, p. 216; Horn, Revis. Ten. N. A. p. 275 (1870); Lec. & Horn, Class. Col. N. A. p. 365 (1883).

Two species only are known of this genus—one found in North America, from California to the Gila river, and just within our limits; the other in the island of Santo Domingo.

These insects greatly resemble *Rhyssodes*; they are stated to occur beneath stones, or under bark, in very dry places, and to feign death very persistently.

1. Dacoderus striaticeps.

Dacoderus striaticeps, Lec. Proc. Acad. Phil. 1858, p. 74[1]; Thoms. Arcana, i. t. 12. f. 6; Horn, Revis. Ten. N. A. p. 276[2]; Lec. & Horn, Class. Col. N. A. p. 365[3].

Hab. North America, Fort Yuma[1], Vallecito in California to Fort Grant in Arizona[2], junction of the Colorado and Gila rivers[3].

This species is found just on our northern boundary.

Subfam. *ASIDINÆ.*

This subfamily, as understood here, will include those species placed in it by Horn and Leconte, *Nyctelia* and allies so numerous in South America, and others. Nearly

all the species have the intermediate coxal cavities open externally, and the trochantin visible and usually very prominent; in *Astrotus*, however, the cavities are almost closed, and the trochantin scarcely visible; the third and fourth ventral segments without a coriaceous hind margin. Exceedingly few species of Asidinæ are found in our country south of Mexico.

Group **ASIDIDES.**

The species of this group are numerous in Mexico and the Southern States of North America; none have yet been received from south of Mexico. Two or three new genera described here are perhaps best placed in this group.

ASIDA.

Asida, Latreille, Hist. nat. Crust. et Ins. x. p. 269 (1804); Lac. Gen. Col. v. p. 160 (1859); All. Abeille, vi. p. 159 (1869); Horn, Revis. Ten. N. A. p. 286 (1870); Lec. & Horn, Class. Col. N. A. p. 370 (1883).

Stenomorpha, Sol. Ann. Soc. Ent. Fr. v. p. 487, t. 12. f. 9–14 (1836).

Pelecyphorus, Sol. loc. cit. p. 467; Lac. Gen. Col. v. p. 159; Lec. Class. Col. N. A. part 1, p. 221 (1862).

Euschides, Lec. Ann. Lyc. New York, v. p. 127 (1852); Journ. Ac. Phil. iv. p. 19 (1858); Lac. Gen. Col. v. p. 162 (1859).

Philolithus, Lac. Gen. Col. v. p. 157 (1859).

I have not retained *Pelecyphorus*, *Philolithus*, or *Euschides* as distinct from *Asida*; it appears impossible to separate them satisfactorily. The New-World *Asidæ* are probably confined to the southern parts of North America and to Mexico. The North-American forms are mostly well known, but of the Mexican species few have been described till now, though existing in many collections.

The species are numerous in Mexico, though none have yet been received from south of that country; it is possible one or two may occur in Guatemala.

The *Asida tropica*, Kirsch, from Bogota, judging from the description, appears to have little to do with *Asida*, the length given is 4½ millim.; the locality, Chili, given by Solier for *A. asidoides* is probably in error for Mexico. Some species of *Asida*, as *A. marginata*, *lirata*, *polita*, *convexa*, *convexicollis*, &c., found in Arizona and the country adjacent to our northern limit, may yet occur in Northern Mexico.

Certain of the *Euschides* group have a very different facies from *Asida*, several superficially resembling *Eleodes*, but species occur intermediate which might be placed in either. *Euschides* is well represented in Mexico, and the species numbered 24–35 belong to it; one or two species (*A. villosa* and *subpilosa*) are covered with long, erect or decumbent, hairs.

The different species are found beneath stones in dry arid districts.

1. **Asida mexicana.**

Pelecyphorus mexicanus, Sol. Ann. Soc. Ent. Fr. 1836, p. 469, t. 11. f. 11–16[1]; Dupont, Dej. Cat. 3rd ed. p. 207.

Pelecyphorus pistrinarius, Chev. Dej. Cat. 3rd ed. p. 207.

Hab. Mexico[1] (*coll. F. Bates*), Tehuacan (*Sallé, Höge*).

Apparently a common species, and sent by Höge in large numbers.

2. **Asida rugosissima.** (Tab. III. fig. 1.)

Broad, convex, black, the depressions of the surface usually filled with earthy matter. Head dull, finely but not very closely punctured; prothorax very coarsely and closely punctured, rugulose, strongly transverse, rounded at the sides, a little broader behind than in front, base bisinuate, hind angles broad and prominent and a little produced behind; elytra short, dilated, strongly rounded at the sides, widest about the middle, narrowed suddenly and emarginate at the shoulders just before the base, the sharply toothed humeral angles hidden beneath the thorax, with two very prominent transversely wrinkled dorsal ridges confluent behind before the apex, a sharp marginal ridge and a row of flattened transverse elevations along the suture, the intervals very coarsely and transversely wrinkled; antennæ with intermediate joints scarcely longer than broad; the outer apical angle of the anterior tibiæ with a short, blunt tooth. Beneath dull, closely and finely punctured.

Length 15–20 millim.

Hab. Mexico, Hacienda de San Miguelito, Saltillo in Coahuila (*Dr. Palmer*).

Four examples. Allied to *Asida sordida,* Lec., from New Mexico, but broader and shorter, the elytra more coarsely wrinkled, &c.

3. **Asida interrupta.**

Broad, convex, a little flattened above, black, the depressions usually filled with earthy matter. Prothorax rugulose, transverse, sides rounded, a little wider at the base than at the apex, hind angles acute and produced behind, base bisinuate; elytra short, rounded at the sides, widening a little from the base to about the middle, emarginate at the shoulders, humeral angles acutely toothed and hidden beneath the base of the thorax, with two transversely wrinkled dorsal ridges confluent before the apex, a sharp marginal ridge, and the suture a little raised and wrinkled, the intervals strongly wrinkled transversely; anterior tibiæ with the outer apical angle produced into a blunt tooth. Beneath finely but not very closely punctured.

Length 17 millim.

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

One example. Allied to *A. rugosissima,* but smoother and flatter, the elytra less narrowed towards the base, the hind angles of the thorax produced and more acute, &c.; shorter and flatter than *A. sordida* and its varieties.

4. **Asida funesta.**

Oblong oval, convex, a little depressed above, black, slightly shining. Head transversely impressed in front; prothorax coarsely and closely punctured, rugulose, transversely rugulose along the lateral margins, rounded at the sides, narrowed in front, the anterior angles produced, narrowed and sinuate behind, the hind angles produced and prominent, though not acute, and slightly overlapping the elytra, base bisinuate; elytra somewhat dilated, widened from the base to beyond the middle, rather suddenly narrowed behind, and the apex a little produced, humeral angles rounded, with a very prominent dorsal ridge starting from

the base and obsolete before the apex, and a sharply defined marginal ridge, midway between the marginal and dorsal ridges there is [in some specimens] another ridge not reaching the base, the suture is indistinctly raised and slightly punctured, the ridges are connected by raised, prominent, transverse, sinuous wrinkles, the wrinkles finer and more numerous along the margin; outer apical angle of anterior tibiæ with a sharp tooth. Beneath with scattered, coarse punctures and short longitudinal wrinkles; epipleuræ with coarse, scattered punctures, vertical.

Length 15–19 millim.

Hab. Mexico (*coll. F. Bates*), Puebla (*Sallé*).

Six examples.

5. **Asida clathrata.** (Tab. III. fig. 2.)

Pelecyphorus clathratus, Sallé in litt.

Oblong oval, convex, depressed above, black with an æneous tinge, rather shining. Head transversely impressed in front; prothorax coarsely rugulose, the disc with a more or less smooth sinuous ridge on each side, and two rounded impressions near the centre, the ridges defined externally by an impression not reaching the base, rounded at the sides, a little broader than long, narrowed and sinuate behind, hind angles produced and prominent, though not acute, and overlapping the base of the elytra, narrowed in front with the angles produced and prominent, base bisinuate; elytra flattened, dilated, widened from the base to beyond the middle, with two flattened interrupted dorsal ridges, obsolete before the apex, and the outer of which often indistinct and not reaching the base, a marginal ridge sharply defined and slightly reflexed, the suture a little raised, flattened, and finely transversely strigose, the marginal and dorsal ridges and the suture are connected by transverse wrinkles, leaving each interstice with a series of oblong impressions, the whole surface with fine scattered punctures, humeral angles rounded; epipleuræ vertical, with scattered punctures; a sharp spine at outer apical angle of the anterior tibiæ. Beneath with widely scattered fine punctures.

Length 14–17 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Oaxaca (*Höge*), Tehuacan, Cuernavaca (*Sallé*).

This fine species is not very closely allied to any other known to me.

6. **Asida morbillosa.**

Pelecyphorus morbillosus, Lec. Proc. Acad. Phil. ix. p. 74 (1858) [1].
Philolithus morbillosus, Lac. Gen. Col. v. p. 725.
Asida morbillosa, Horn, Revis. Ten. N. A. p. 284 [2].

Hab. North America, Lower California [2].—Mexico, Sonora [1] (*Morrison*).

7. **Asida asidoides.**

Pelecyphorus asidoides, Sol. Ann. Ent. Soc. Fr. 1836, p. 471, t. 11. f. 17 [1].
Asida asidoides, Lac. Gen. Col. v. p. 161, nota.

Hab. Mexico (*ex coll. Sturm*).—?Chili [1].

Three examples. This species is labelled *Asida asidoides* in the Sallé collection, and agrees fairly well with Solier's description. The locality given, Chili, is probably a mistake.

8. **Asida forreri.** (Tab. III. fig. 3.)

Broad, depressed, dull black, with scattered brown scaly hairs. Prothorax transverse, rugulose, closely and rather coarsely punctured, with a few, small, indistinct, smooth elevations, lateral margins thin and expanded, wider behind than in front, rounded at the sides, narrowed and sinuate behind before the outwardly directed subacute hind angles, narrowed and very feebly sinuate in front, the anterior angles produced and prominent, base bisinuate; elytra broad, flattened, broader than the thorax at the base, a little widened to about the middle, somewhat abruptly narrowed behind, and the apex a little produced, shoulders raised and the angles obtuse, with an acute distinct marginal ridge obsolete before the apex, and three irregular rows of large shallow impressions, the impressions separated one from another by transverse wrinkles and some indistinct longitudinal elevations: outer apical angle of anterior tibiæ with a sharp tooth, femora and tibiæ coarsely punctured. Beneath smooth, with a few exceedingly fine punctures or scratches.
Length 13 millim.

Hab. Mexico, Ventanas (*Forrer*).

One example. Allied to the North-American *Asida opaca* and *A. mancipata*, Horn.

9. **Asida foveolata.**

Pelecyphorus foveolatus, Sol. Ann. Soc. Ent. Fr. 1836, p. 472[1].
Pelecyphorus porcatus, Dej. in litt.

Hab. Mexico[1] (*coll. F. Bates*), Capulalpam, Yolos, Peras (*Sallé*), Jalapa, Oaxaca (*Höge*).

10. **Asida tristis.**

Broad, short, slightly depressed, black, scarcely shining. Prothorax transverse, very coarsely and closely punctured, rugulose, rounded at the sides, a little narrowed and sinuate behind before the not very prominent hind angles, base bisinuate, with an indistinct (sometimes obsolete) smooth central line; elytra short, dilated, rounded at the sides, widest about the middle, a little broader at the base than the thorax, humeral angles rounded, with three fine dorsal ridges (the outer not reaching the base) obsolete behind, the suture a little raised, and a sharp well-defined marginal ridge, the interstices finely and irregularly wrinkled transversely and with scattered fine punctures; outer apical angle of anterior tibiæ with a short tooth; legs short, femora and tibiæ coarsely rugulose. Beneath with scattered rather coarse punctures, the ventral segments smoother with scattered punctures and indistinct longitudinal scratches.
Length 12–14 millim.

Hab. Mexico (*coll. F. Bates*), San Antonio de Arriba (*Sallé*), Las Vigas (*Sallé*, *Höge*).

Labelled *Asida* (*Pelecyphorus*) *tristis* in the Sallé collection, the name I have adopted. Sent in some numbers by Höge.

11. **Asida suturalis.** (Tab. III. fig. 4.)

Oblong oval, rather convex, black, sometimes with an æneous tinge, with scattered light-brown scale-like hairs, slightly shining. Head slightly impressed in front; prothorax coarsely and closely punctured, rugulose, scarcely broader than long, slightly rounded at the sides, narrowed and feebly sinuate before the base, the hind angles straight much produced and overlapping the elytra, a little narrowed towards the front, the anterior angles prominent, with a smooth raised central line and two or three indistinct smooth irregular elevations on each side, base bisinuate; elytra slightly rounded at the sides, widest about the middle, but little narrowed towards the base, the base broader than the thorax, humeral angles raised and almost rounded, with two (rarely three) indistinct interrupted flattened dorsal ridges (often obsolete) and a sharp marginal ridge almost reaching the apex, the interstices with scattered shallow feeble longi-

tudinal impressions towards the suture and fine transverse wrinkles towards the margins, the entire surface sometimes with a few scattered indistinct punctures, the suture is depressed and flattened throughout its entire length; outer apical angle of the anterior tibiæ with a short blunt tooth. Beneath shining, with fine widely scattered punctures, the punctures a little coarser and closer along the sides and on the last ventral segments.

Length 13–15 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates, Sallé*), Oaxaca, Almolonga (*Höge*).

Nine examples.

12. **Asida longipennis.** (Tab. III. fig. 5, ♂.)

Elongate, rather convex, black, sparsely clothed with brown scales. Head impressed in front, and with an indistinct impression between the eyes; prothorax scarcely broader than long, closely and coarsely punctured, rugulose, rounded at the sides, the lateral margins slightly reflexed, slightly narrowed and sinuate behind before the rectangular hind angles, narrowed in front, the anterior angles prominent and slightly pointed, with a smooth central line, the disc with two rounded impressions on each side—one near the middle and another a little behind and nearer the lateral margin, base feebly bisinuate almost truncate; elytra long, somewhat parallel, a little widened from the base to beyond the middle, narrowed rather suddenly behind with the apex a little produced, a little wider at the base than the thorax, with three well-defined smooth dorsal ridges (the outer short, not reaching the base) confluent behind the middle, a marginal ridge nearly reaching the apex and connected behind by a spur from the first dorsal ridge, the suture raised for its entire length, the interstices with scattered punctures; antennæ thin, intermediate joints long and obovate; outer apical angle of the anterior tibiæ with a long sharp spine, femora and tibiæ coarsely punctured. Beneath densely but not coarsely punctured.

Length 13–15 millim. (♂ ♀.)

Hab. Mexico, San Antonio de Arriba, San Andres (*Sallé*).

Two examples. Labelled *Pelecyphorus longipennis*, Chev., in the Sallé collection.

13. **Asida induta.** (Tab. III. fig. 6.)

Oblong oval, dull black, clothed with ferruginous scale-like hairs. Head with a rounded impression between the eyes, transversely impressed in front, finely and somewhat closely punctured; prothorax transverse, rounded at the sides, closely and rather finely punctured, margins a little raised and expanded, narrowed and sinuate behind, the hind angles almost rectangular and not produced, narrowed and feebly sinuate in front, the anterior angles produced and pointed, the base almost truncate; elytra rounded at the sides, the humeral angles rounded, a little broader at the base than the thorax, widest about the middle, with three not very prominent dorsal ridges—the first distinct only at the base, obsolete behind, the second confluent before the apex with a marginal ridge and enclosing the shorter third dorsal ridge, interstices with a few scattered shallow punctures, the entire surface densely clothed with scales; outer apical angle of anterior tibiæ with a sharp tooth; femora and tibiæ coarsely punctured. Beneath coarsely and densely punctured.

Length 12 millim.

Hab. Mexico (*coll. F. Bates*).

One example. I know of no near ally to this species.

14. **Asida guanajuatensis.**

Oblong oval, rather convex, somewhat densely clothed with light brown or ferruginous scale-like hairs. Prothorax a little broader than long, closely and coarsely punctured, rugulose, the disc with two rounded

impressions on each side towards the base and an indistinct central groove, rounded at the sides, narrowed and sinuate towards the base, the hind angles produced and overlapping the elytra, narrowed in front and the anterior angles somewhat prominent, base bisinuate; elytra broader than the thorax at the base, rather short and dilated, widest behind the middle, rounded at the sides, humeral angles obtuse, with a network of raised lines which enclose a series of three or four interrupted rows of shallow depressions, the depressions usually filled with the scale-like hairs; antennæ short, stout; outer apical angle of the anterior tibiæ with a sharp tooth. Beneath slightly shining, coarsely but not very closely punctured.

Length 12–15 millim.

Hab. Mexico (*coll. F. Bates*), Guanajuato (*Sallé*).

Six examples. Labelled *Ologlyptus guanajuatensis*, Dugès, in the Sallé collection.

15. **Asida scutellaris.** (Tab. III. fig. 9, ♂.)

Oblong oval, rather convex, black, somewhat densely clothed with ferruginous or brown scales. Head transversely impressed in front, finely punctured; prothorax broader than long, closely and rather coarsely punctured, rugulose, with a distinct smooth central raised line, and an indistinct oblique impression on each side towards the base, rounded at the sides, narrowed and sinuate behind, hind angles very prominent, produced and overlapping the elytra, narrowed in front, the anterior angles a little prominent and rounded, base slightly produced in the middle and almost rounded; elytra broader than the thorax at the base, sides rounded, short and dilated about the middle (♀) or longer and slightly widened (♂), with three prominent rounded smooth shining ridges—the first two confluent behind, and the third not reaching the base, and a sharp marginal ridge confluent just before the apex with the united first and second, the suture raised and prominent, the intervals with matted light brown appressed scaly hairs and in the centre of each a more or less distinct line dividing the scales into two rows; anterior tibiæ toothed at outer apical angle; prosternum prominent behind, scarcely declivous; scutellum with a smooth central keel. Beneath sparingly but rather coarsely punctured.

Length 14–18 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Puebla (*Sallé*), Almolonga, Jalapa, Oaxaca (*Höge*).

16. **Asida fallax.** (Tab. III. fig. 8.)

Oblong oval, rather convex, black, sparingly clothed with brown scaly hairs. Head transversely impressed in front; prothorax broader than long, closely and rather coarsely punctured, rugulose, with a smooth central raised line, rounded at the sides, narrowed in front and behind, slightly sinuate before the base, the base almost rounded in the middle, hind angles produced and overlapping the elytra; elytra broader than the thorax at the base, rounded at the sides, widest about the middle, humeral angles obtuse and raised, with three fine ridges—the first two confluent behind, the third not reaching the base, and a marginal ridge confluent just before the apex with the united first and second, the suture raised and prominent, the second, third, and marginal ridges sometimes connected by one or two transverse raised lines, the interstices with matted dark-brown scaly hairs and in the centre of each indications of a darker central band; anterior tibiæ with a sharp spur at the outer apical angle; scutellum with a central keel. Beneath with coarse or fine scattered punctures, prosternum a little prominent raised and rounded behind.

Length 15 millim. (♂ ♀.)

Hab. Mexico, Guanajuato, Toluca (*Sallé*), Mexico city (*Dr. Palmer*).

Five examples. Closely allied to *A. scutellaris*, but with the ridges of the elytra much finer and less prominent &c. Labelled *Asida fallax*, Chev., in the Sallé collection.

17. **Asida laticollis.** (Tab. III. fig. 7.)

Oblong oval, rather convex, dull black, densely clothed with brown scaly hairs. Head transversely impressed in front; prothorax finely and very densely punctured, rugulose, with a smooth indistinct central raised line, broad, transverse, rounded at the sides, very feebly sinuate and scarcely narrowed behind, hind angles produced, prominent, straight, and overlapping the elytra, narrowed in front, the anterior angles prominent and obtuse, base feebly bisinuate and subtruncate in middle; elytra as wide as or a little wider than the thorax at the base, rounded at the sides, broadest about the middle, humeral angles obtuse, with three fine ridges—the first two confluent behind, the third not reaching the base, and a marginal ridge confluent just before the apex with the united first and second, the suture raised and prominent, the two outer dorsal and the marginal ridges sometimes connected by one or two transverse raised lines, the interstices with matted dark-brown scaly hairs and in the centre of each a darker line dividing the lighter scales into two rows; anterior tibiæ with a sharp tooth at outer apical angle; scutellum with a central keel. Beneath finely and closely punctured; prosternum produced behind and rounded, subhorizontal.
Length 17–18 millim.

Hab. Mexico (*coll. F. Bates*), Guanajuato (*Sallé*).

Four examples. Closely allied to *A. fallax*, from which it differs in being larger, broader, and longer, the thorax broader and more strongly transverse, more finely and closely punctured, with the hind angles straighter and more produced, and the base straighter; the head smoother, the antennæ a little shorter, &c.

18. **Asida favosa.**

Oblong oval, rather convex, dull black, clothed with dark-brown scaly hairs. Head broad, transversely impressed in front, finely and sparingly punctured; prothorax finely and very densely punctured, rugulose, with a smooth shining central raised line, transverse, narrowed and feebly sinuate behind, hind angles produced, prominent, and overlapping the elytra, narrowed in front with the angles prominent but not acute, base bisinuate and the central lobe a little produced and subtruncate; elytra broader than the thorax at the base, sides rounded, somewhat dilated from the base to a little beyond the middle, humeral angles a little raised and obtuse, with three smooth fine interrupted ridges (the outer not reaching the base) and a sharp marginal ridge, these ridges unite before the apex and are more or less connected by a few raised transverse lines, the suture raised and smooth, the interstices densely clothed with dark brown scales; anterior tibiæ truncated at apex, bluntly toothed at outer apical angle; scutellum with a central keel; antennæ rather stout, intermediate joints scarcely longer than broad. Beneath slightly shining, ventral segments sparingly and finely punctured; prosternum prominent behind, rounded at apex, subhorizontal.
Length 17 millim. (♀.)

Hab. Mexico, Guanajuato (*Sallé*).

One example. Closely resembling *A. laticollis* and *A. fallax*, and perhaps a variety of the latter.

19. **Asida similata.**

Oblong ovate, rather convex, dull black, clothed with dark-brown scales. Head transversely impressed in front; prothorax rugulose, somewhat coarsely, closely, and irregularly punctured, with a smooth central raised line, lateral margins rather strongly rounded, a little swollen and reflexed, and sinuate and narrowed behind, hind angles produced, outwardly directed, and overlapping the elytra, narrowed and rounded towards the front, the anterior angles prominent and rounded, base bisinuate, the central lobe subtruncate; elytra a little broader than the thorax at the base, strongly rounded at the sides, widest about the middle, humeral angles obtuse and hidden by the hind angles of the thorax, with three fine ridges (the outer not

reaching the base), the suture raised and smooth, and a marginal ridge, the dorsal and marginal ridges confluent behind and the two outer and the marginal connected by one or two raised transverse lines, the interstices with densely matted dark-brown scaly hairs; anterior tibiæ with outer apical angle sharply toothed; scutellum with a central keel; antennæ short and stout. Beneath slightly shining, ventral segments sparingly and finely punctured; prosternum prominent behind, rounded at apex.

Length 18 millim. (♀.)

Hab. Mexico (*coll. F. Bates*).

One example. Closely allied to *A. favosa*, &c., but with the margins of the thorax swollen and slightly reflexed, more strongly sinuate before the base, and the hind angles outwardly directed.

Of the five closely allied species here described it is not unlikely that *A. similata*, *A. fallax*, and *A. favosa* may eventually prove to be forms of one species; but *A. scutellaris* and *A. laticollis* seem distinct enough—the former by its thickened prominent elytral ridges, and the latter by its very broad transverse thorax.

20. **Asida dissimilis.** (Tab. III. fig. 10, ♂.)

Oblong oval, a little depressed above, dark reddish brown, densely clothed with brown scaly hairs. Head deeply impressed in front; prothorax transverse (♀), or about as long as broad (♂), closely and finely punctured, rugulose, with a smooth raised central line, the disc with a rounded impression on each side near the middle and an oblique impression on each side at the base, rounded at the sides, narrowed and sinuate behind, the acute hind angles slightly overlapping the elytra, narrowed in front and the angles a little prominent, the lateral margins raised and slightly reflexed, base strongly bisinuate; elytra a little wider than the thorax at the base, rounded at the sides and a little dilated about the middle (♀), subparallel and scarcely widening from the base (♂), humeral angles obtuse and a little raised, with three fine ridges—the first indistinct (sometimes obsolete) and second confluent a little beyond the middle, the third short, not reaching the base, enclosed by the second and a marginal ridge, the two latter confluent before the apex: outer apical angle of anterior tibiæ with a sharp tooth; legs and antennæ stout, intermediate joints of latter subtransverse; trochantin small. Beneath coarsely and closely punctured.

Length 11–13 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates, Sallé*).

Five examples. This species has much the appearance of certain *Ologlypti*, but agrees better in structural characters with *Asida*.

21. **Asida palmeri.** (Tab. III. fig. 12.)

Oblong ovate, dark reddish brown, shining. Head closely and rather coarsely punctured, feebly impressed transversely in front; prothorax transverse, wider behind than in front, narrowed and sinuate behind just before the slightly prominent subacute outwardly directed hind angles, narrowed in front, the anterior angles broadly triangular and prominent, base broad nearly straight and fitting close to the elytra, lateral margins strongly reflexed and crenulate, disc sparingly and finely, and the base and sides coarsely punctured or rugulose; elytra a little narrowed at the base, widest about the middle, the base broad, almost straight, and a little wider than the thorax, with a marginal ridge [prominent at the shoulders, obsolete before the apex], and traces of two or three obsolete ridges, the outer only of which is at all distinct, and represented by a short raised line not reaching the base and close to and parallel with the margin, humeral angles raised and prominent, obtuse, the surface with scattered fine shallow impressions; anterior tibiæ

with a sharp prominent curved tooth at outer apical angle. Beneath slightly shining, very finely and densely strigose.

Length 21 millim.

Hab. Mexico, San Luis Potosi (*Dr. Palmer*).

One example.

22. **Asida lata.** (Tab. III. fig. 18.)

Broad oval, convex, black, shining. Head impressed in front, finely and sparingly punctured; prothorax transverse, the lateral margins a little dilated, broad, slightly reflexed, and swollen, the sides rounded, but little narrowed behind, narrowed in front, with the obtuse anterior angles a little prominent, hind angles obtuse, a little produced, and slightly overlapping the elytra, base bisinuate, and a little produced in the middle and rounded, disc smooth, the reflexed margins rugulose and crenulate; elytra at the base broader than the thorax, short, but little narrowed towards the base, widest about the middle, the marginal carina represented by a short thickened ridge only at the shoulders, humeral angles obtuse, with indistinct rows of feeble longitudinal elevations and scattered shallow punctures, or nearly smooth (the elevations obsolete) with a few very fine scattered indistinct punctures; anterior tibiæ with a sharp tooth at outer apical angle. Beneath almost smooth.

Length 15–16 millim.

Hab. Mexico, Hacienda de San Miguelito, San Luis Potosi (*Dr. Palmer*).

Four examples.

23. **Asida marginicollis.** (Tab. III. fig. 16.)

Oblong ovate, convex, black, shining. Head transversely impressed in front, sparingly and finely punctured; prothorax smooth or almost imperceptibly punctured, rather convex, the lateral margins swollen and reflexed with scattered rather fine punctures, slightly rounded at the sides, but little narrowed behind, the hind angles (formed by a continuation of the swollen margin) blunt, a little produced and slightly overlapping the elytra, a little narrowed in front with the angles obtuse, base rounded; elytra smooth or with a few very indistinct fine scattered punctures or scratches, broader than the thorax, the obtuse humeral angles thickened and raised and creased within, rounded at the sides, widest a little behind the middle, the marginal carina obsolete, apices very slightly divergent at the suture; anterior tibiæ with a short tooth at outer apical angle. Beneath smooth, almost impunctate.

Length 17–19 millim.

Hab. Mexico, Guanajuato (*Sallé*).

Three examples. This species may be known by its swollen reflexed thoracic margins. *A. lata* and *A. marginicollis* differ from typical *Asida* (*Euschides*) in having the hind angles of the thorax overlapping the elytra, and the elytra at the base wider than the thorax.

24. **Asida villosa.** (Tab. III. fig. 13.)

Broad, short ovate, convex, brownish black, slightly shining, pubescent, above densely clothed with long erect fulvous hairs. Head faintly impressed on each side in front, finely and sparingly punctured; prothorax transverse, the disc strongly and transversely convex and impunctate, lateral margins broad and reflexed, crenulate, and with a few coarse scattered impressions within, broader at the base than in front, the sides strongly rounded, narrowed and feebly sinuate in front with the anterior angles acute and a little produced, rounded behind to the inwardly curved obtuse scarcely prominent hind angles, base trisinuate broadly impressed in the middle and with a rather prominent tubercle on each side; elytra almost

impunctate, short, broad, a little narrowed at the base, rounded at the sides, widest a little behind the middle, humeral angles obtuse, with a crenulate marginal ridge starting from the shoulder and obsolete before the apex, base emarginate and raised on each side of the large triangular scutellum, concave in the middle; anterior tibiæ with a blunt tooth at outer apical angle. Beneath dull, the ventral segments exceedingly finely transversely strigose and with a few scattered punctures along the sides and on the last segment.

Length 15 millim.

Hab. Mexico, Puebla (*Sallé*), Tehuacan (*Höge*).

This species, which belongs to the *Euschides* group, has no near ally, so far as I am aware.

25. **Asida subpilosa.**

Stenomorpha subpilosa, Sol. Ann. Ent. Soc. Fr. 1836, p. 490, t. 12. f. 10, 13[1].

Hab. Mexico[1], Puebla (*Sallé*), Tehuacan (*Höge*).

This fine large species was sent in plenty by Höge.

26. **Asida pubescens.**

Closely allied to *A. subpilosa*, and differing from it as follows:—The prothorax is a little more finely punctured, the elytra, instead of being clothed with long erect fulvous hairs, are almost imperceptibly pubescent; the femora and tibiæ coarsely rugulose, shining, and with scattered short fulvous hairs; narrower and more parallel, and the upper surface almost glabrous.

Length 25 millim.

Hab. Mexico (*Sallé*).

One example. This and the two following species (*A. difficilis* and *A. thoracica*) are closely allied, and till we obtain more material it is difficult to say whether they are really distinct.

27. **Asida difficilis.** (Tab. III. fig. 11.)

Oblong ovate, reddish black, shining. Head with scattered coarse punctures and an impression on each side in front; prothorax longer than broad, the sides rounded, equally narrowed in front and behind, anterior angles pointed, acute, and outwardly directed, hind angles rounded and almost obsolete, the base slightly rounded, feebly emarginate, and with a rather broad triangular impression in front of the scutellum, lateral margins crenulate, slightly reflexed and coarsely rugulose within, the disc with scattered fine punctures, the sides with coarse scattered impressions; elytra long, rounded at the sides, a little narrowed towards the base, widest a little beyond the middle, base about as wide as the thorax, slightly rounded emarginate, and the margin a little raised, humeral angles obtuse, with widely scattered fine punctures, some very indistinct transverse scratches, and traces of two or three ridges, the usual marginal ridge quite obsolete; legs reddish brown, the outer apical angle of anterior tibiæ with a sharp tooth. Beneath shining; the ventral segments with scattered fine short transverse scratches, and a few small punctures towards the apex.

Length 24–25 millim.

Hab. Mexico, San Luis Potosi, Hacienda de San Miguelito (*Dr. Palmer*).

Var. Similar but with the thorax shorter, more convex, more rounded at the sides, and the hind angles obsolete; the elytra widened behind, &c.

Hab. Mexico (*Sallé*).

28. **Asida thoracica.**

Oblong oval, black, shining. Head closely and very coarsely punctured, broadly impressed in front; prothorax a little broader than long, the sides rounded, narrowed and sinuate just before the rectangular hind angles, narrowed in front with the anterior angles prominent and triangular, base slightly rounded, feebly emarginate, and with a broad impression in the middle, coarsely and rather closely punctured on the disc, rugulose along the sides, lateral margins crenulate and reflexed; elytra long, subtruncate at the base, rounded at the sides, a little narrowed towards the base, base a little narrower than the thorax, humeral angles almost rounded, a marginal ridge distinct only at the shoulder, the surface somewhat coarsely but not very closely punctured; anterior tibiæ blunt toothed at outer apical angle; femora and tibiæ very stout, coarsely rugulose. Beneath dull, finely and closely strigose; prosternum with a prominent blunt tubercle behind.

Length 25 millim.

Hab. Mexico (*Sallé*).

One example. Closely allied to *A. pubescens*, but more coarsely and closely punctured, the central basal impression of the prothorax deeper, the upper surface glabrous, &c.

29. **Asida rufipes.** (Tab. III. fig. 14.)

Obovate, broad, black, shining. Head with a feeble impression on each side in front, sparingly punctured; prothorax not very convex, very finely and sparingly punctured on the disc, and with rather coarse scattered punctures along the sides, transverse, the sides slightly rounded, narrowed and sinuate behind before the subacute, but not prominent, hind angles, narrowed in front with the anterior angles acute and prominent, base subtruncate, lateral margins narrowly expanded and reflexed; elytra broad, convex, strongly rounded at the sides, wider at the base than the thorax, much widened behind, the basal margin a little raised, and sinuate on each side to the humeral angles which are slightly prominent, with scarcely any indication of a marginal ridge, and the surface coarsely and somewhat closely punctured; scutellum large, prominent, transversely triangular; legs red, anterior tibiæ with a sharp tooth at outer apical angle. Beneath shining; ventral segments with scattered, very fine, longitudinal wrinkles, and a few scattered punctures at the apex.

Length 19 millim.

Hab. Mexico, San Luis Potosi (*Dr. Palmer*).

One example.

30. **Asida costata.**

Stenomorpha costata, Sol. Ann. Ent. Soc. Fr. 1836, p. 490[1].

Hab. Mexico[1] (*Truqui*).

I have seen but one specimen of this species contained in the Sallé collection.

31. **Asida umbrosa.** (Tab. III. fig. 17.)

Oblong oval, dull black, scarcely shining. Head transversely impressed in front, smooth; prothorax transverse, the disc smooth and convex, the lateral margins broadly dilated, a little reflexed, and coarsely punctured and wrinkled transversely within, the sides slightly rounded, narrowed in front, and the anterior angles a little prominent and rounded, but little narrowed behind, the base bisinuate and a little produced and rounded in the centre; elytra smooth, narrower than the thorax at the base, rounded at the sides, widest behind the middle, feebly margined (almost rounded) from the shoulders to beyond the

middle, base emarginate, humeral angles obtuse, a little raised and creased within; anterior tibiæ with a rather long tooth at outer apical angle. Beneath almost smooth.

Length 20–26 millim.

Hab. MEXICO (*coll. F. Bates*), Guanajuato (*Sallé*).

Six examples. Belongs to the *Euschides* group.

32. **Asida obovata.**

Euschides obovata, Lec. Ann. Lyc. New York, v. p. 127 (1852)[1].

Asida obovata, Horn, Revis. Ten. N. A. p. 288 (1870).

Hab. NORTH AMERICA, Gila river [1].—MEXICO, Alamos (*Buchan-Hepburn*).

Three examples taken by Mr. Hepburn agree fairly well with the description of this species, except that the elytra are smoother and depressed along the suture, and the thorax a little less convex.

33. **Asida blapsoides.**

Stenomorpha blapsoides, Sol. Ann. Ent. Soc. Fr. 1836, p. 491, t. 12. f. 12–14[1].

Hab. MEXICO [1] (*coll. F. Bates, Truqui*), Puebla, Guanajuato (*Sallé*), Mexico city, Oaxaca, Jalapa (*Höge*).

Apparently common in Mexico. The examination of a considerable number of specimens has convinced me that this is a most variable species. The prothorax is in some examples very finely, in others coarsely and closely punctured, with the extended lateral margins raised, though scarcely reflexed, and feebly or strongly rounded, transverse, or as long as broad; the elytra very variable in shape and sculpture, the marginal carina obsolete, or represented by a raised line from the shoulder to a little beyond the middle, the humeral angles usually a little prominent, the surface finely and sparingly or closely and coarsely (rarely the punctures confluent and almost rugulose) punctured; intermediate forms occur so that it seems impossible to separate them. Three examples from Puebla have the thorax transverse; the elytra shorter and broader, and the marginal carina distinct towards the base; the upper surface closely and rather coarsely punctured. Another example has the elytra reddish brown along the suture; others have the elytra, instead of being nearly smooth, coarsely punctured and rugulose.

34. **Asida blanda.** (Tab. III. fig. 19.)

Closely allied to *A. blapsoides*, but with the lateral margins of the smooth more convex prothorax a little narrower, reflexed, and swollen (anteriorly); the elytra smooth, less parallel, more swollen behind, and depressed along the suture; the anterior tibiæ with a short, blunt tooth at outer apical angle; with no trace of punctuation, except along the lateral margins of the thorax and on the anterior margin of the head.

Length 20 millim.

Hab. MEXICO, Guanajuato (*Sallé*).

One example. From *A. obovata* and *A. convexa*, Lec., it may be known by its smoother surface, and the slightly broader, though less reflexed, lateral thoracic margins.

35. **Asida sphæricollis.** (Tab. III. fig. 15.)

Obovate, black, shining. Head broadly impressed in front, anterior margin finely punctured; prothorax transverse, strongly and transversely convex, smooth, very narrowly margined, the sides rounded, hind angles obsolete, front angles obtuse and scarcely prominent, the base rounded; elytra convex, about as broad as the thorax at the base, gradually widened to beyond the middle, then narrowed, with the apex a little produced, the marginal carina obsolete, and represented only by a very short ridge at the shoulders, humeral angles obtuse, finely and sparingly punctured, the suture depressed towards the base, and with traces of dorsal grooves; anterior tibiæ with a short tooth at outer apical angle. Beneath shining, almost impunctate; intercoxal process raised, and level with the metasternum.

Length 13 millim.

Hab. Mexico, San Luis Potosi (*Dr. Palmer*).

One example. This is the smallest and narrowest *Asida* (*Euschides*) I have yet seen; it resembles somewhat *A. convexicollis* from Arizona, though very much smaller than that species.

TISAMENES.

Head deflexed, sunk into the prothorax up to the eyes; lateral margins of the front swollen and rounded; epistoma broadly but not very deeply emarginate; labrum prominent, triangularly emarginate, clasped by the mandibles; mentum large, transverse, fitting closely to the short bluntly toothed side pieces of the submentum; gula deeply sunk into the prothorax, the side-pieces of the submentum alone visible; ligula concealed; eyes transversely oval; prothorax with the lateral margins angular and greatly expanded; elytra with prominent ridges, clothed towards the suture with rows of densely matted decumbent hairs; antennæ very short, the joints widening but little outwardly, third joint twice as long as second, fourth to ninth decreasing in length, tenth broad, subtriangular, eleventh short, small, and rounded at the apex, and clothed with short spiny hairs; femora, tibiæ (the latter truncate at the apex, and the outer angle with a short, blunt tooth), and tarsi very stout, densely clothed with scales, smooth, without any indication of tubercles or punctures, the tarsi with short spiny hairs, and not sulcate beneath; middle coxal cavities widely open externally, trochantin large and prominent; intercoxal process broadly rounded in front, and with the anterior margin raised; epipleuræ broad, vertical, narrowed towards the base and apex.

Allied to *Asida*, and resembling *A. elata*, Lec., somewhat in the form of the thorax, but with stouter limbs, the head deflexed, &c.

One species from Mexico.

1. **Tisamenes truquii.** (Tab. II. fig. 15.)

Elongate, strongly convex, dark reddish brown, pubescent, densely clothed with scale-like hairs. Head broadly impressed in front, indistinctly punctured; prothorax with the lateral margins raised and greatly dilated a little before the middle, and produced into a broad, subtriangular, blunt tooth (rounded in front, narrowed and emarginate behind to the base), sinuate before the anterior angles, which are blunt, slightly truncate, and not prominent, emarginate in front, the base almost truncate, the hind angles obtuse, finely rugulose, the disc on each side with a sinuous fulvous band, slightly spotted or marked with yellow; elytra elliptic in form, convex, much narrowed towards the base, rounded at the sides, scutellum small, humeral angles produced into a prominent, outwardly directed, short, blunt tooth, with a marginal and two dorsal ridges obsolete before the apex, the dorsal ridges clothed with densely matted dark brown hair, the suture a little raised, bare and shining, the interval between the inner dorsal ridge and the suture with

yellowish white depressed hairs. Beneath dull, densely and finely punctured; prosternum declivous behind, rounded, not prominent.

Length 18–19 millim. (♂ ♀.)

Hab. Mexico (*Truqui*, *Sallé*, *coll. F. Bates*), Mexico city (*Höge*).

This fine species is labelled *Philolithus truquii* in the Sallé collection, but is, I believe, still undescribed.

UCALEGON.

Mentum rather large, transverse, emarginate in front, projecting far beyond, but fitting closely to the bluntly toothed side-pieces of the submentum; labrum prominent, deeply emarginate, clasped by the mandibles; ligula concealed; eyes narrow, strongly transverse; epistoma truncate in front; antennæ with the third joint more than twice as long as the second, fourth to ninth decreasing in length, obconic, tenth broad, eleventh partly sunk in the tenth, small, short, rounded at the apex; last joint of maxillary palpi securiform; thorax with the angles prominent, lateral margins expanded; elytra flattened nearly to the apex, then abruptly declivous, apex a little produced, prettily maculated with velvety spots, and with a curved dorsal ridge; epipleuræ broad, vertical, separated from the elytra by a sharply defined marginal carina; intermediate coxæ widely separate, the cavities open externally, trochantin prominent; femora rough, shining, with irregular coarse punctures and short scattered hairs; outer apical angle of anterior tibiæ produced into a long, sharp tooth; tibiæ and tarsi rather densely clothed with long, depressed, bristly hairs, the tarsi not sulcate beneath; intercoxal process broad, and truncate in front; prosternum declivous behind, the apex a little produced and rounded; upper surface densely clothed with scaly hairs; scutellum long, triangular.

Closely allied to *Asida*. Founded on one species from Mexico.

1. **Ucalegon pulchellus.** (Tab. II. fig. 17.)

Moderately elongate, convex, flattened above, dull black, pubescent, above densely clothed with brown scaly hairs. Head deeply impressed in front; prothorax broader than long, the lateral margins expanded about the middle and rounded, strongly narrowed before and behind, the hind angles rectangular, the anterior angles prominent and produced into a large subtriangular blunt tooth, the base truncate, with a central groove obsolete in front, the disc with a curved, feeble, smooth elevation on each side, the elevations well defined on either side by short, matted, dark brown hair, the surface with scattered fine raised points or granules, the disc rather smooth, the sides rugulose; elytra as wide as the thorax at the base, widened to beyond the middle, humeral angles obtuse, the base subtruncate, with a dorsal ridge, obsolete behind the middle, curving outwardly and parallel with the marginal ridge, and several velvety dark brown markings or spots, a large triangular spot on each side about the middle and near the suture, from which a few large or small spots extend parallel with the dorsal ridge to the base, enclosing a lighter brown space, towards the apex and on each side between the finely denticulated bare dorsal and marginal ridges are a few similar but smaller velvety spots, the suture is marked with dark brown, and a few brown spots are also scattered over the surface. Beneath coarsely and closely punctured, ventral segments finely and closely; epipleuræ with large coarse punctures.

Length 14–16 millim.

Hab. Mexico (*coll. F. Bates*), Tehuantepec (*Sallé*).

Three examples. Labelled *Philolithus sumichrasti*, Dugès, in the Sallé collection.

MICROSCHATIA.

Microschatia, Solier, Ann. Soc. Ent. Fr. 1836, p. 474, t. 11. f. 19–22; Lec. Ann. Lyc. New York, v. p. 129; Lac. Gen. Col. v. p. 157 (1859); Lec. Class. Col. N. A. part 1, p. 221 (1862); Horn, Rev. Ten. N. A. p. 281 (1870); Lec. & Horn, loc. cit. 1883, p. 369.

Three species from North America and one from Mexico constitute this genus.

1. **Microschatia punctata.**

Microschatia punctata, Sol. loc. cit. p. 475, t. 11. f. 22[1].

Hab. Mexico[1] (*Sallé, coll. F. Bates*).

ASTROTUS.

Astrotus, Leconte, Journ. Ac. Phil. iv. p. 19 (1858); Class. Col. N. A. p. 221 (1862); Horn, Revis. Ten. N. A. p. 290 (1870).

Two species of this genus have been described from Texas; three others are now added from Mexico.

1. **Astrotus debilis.** (Tab. II. fig. 22.)

Oblong oval, depressed above, dull black, densely clothed with earth-like scales, slightly pubescent. Head with the lateral margins of the front swollen and rounded; prothorax broader than long, the sides rounded, much narrowed behind, and sinuate before the slightly prominent subrectangular hind angles, slightly narrowed in front, and the anterior angles a little produced and prominent, base truncate, the surface with fine raised points, closer and more distinct along each side of a central groove and on the lateral margins; elytra flattened, a little narrower than the thorax at the base, narrowed and slightly emarginate at the shoulders, widening gradually to beyond the middle, then suddenly narrowed, and the apex produced and rounded, humeral angles obtuse, the base truncate, with a slightly prominent marginal ridge, curving inwards before the apex, and a few short, oblique, or sinuous elevations.

Length 6–9 millim.

Hab. Mexico (*Sallé*), Tehuacan (*Höge*).

Six examples.

2. **Astrotus limosus.** (Tab. II. fig. 21.)

Oblong oval, slightly convex, black, densely clothed with earth-like scales. Head transversely impressed between the eyes; prothorax broader than long, narrowed in front and behind, sides rounded, hind angles rectangular, base truncate, anterior and lateral margins slightly reflexed and swollen, disc with a few scattered almost obsolete flattened sinuous elevations; elytra widest a little beyond the middle, base truncate, fitting closely to and as wide as the thorax, with three (two dorsal and one marginal) serrated ridges—the marginal starting from the shoulder and turning off obliquely before the apex to meet the first dorsal, which starts from near the base, midway between these and parallel with them is another shorter ridge not reaching the base, nor confluent with the others behind, the two dorsal ridges connected a little behind the middle by a short transverse elevation.

Length 7 millim.

Hab. Mexico (*Sallé*).

One example. Allied to *A. debilis*, but more convex, with the thorax less narrowed behind, the elytra not suddenly narrowed at the base, &c.

3. **Astrotus seticornis.** (Tab. II. fig. 20.)

Oblong oval, depressed above, dark reddish brown, clothed with brown scaly hairs, pubescent. Prothorax as long as broad, or subtransverse, the lateral margins a little reflexed and strongly rounded, and narrowed and sinuate before the base, hind angles rather obtuse and subrectangular, narrowed and feebly sinuate in front, the anterior angles prominent, slightly produced and triangular, base bisinuate, and the central lobe a little produced and rounded, surface finely and very closely punctured, with an indistinct smooth central groove, obsolete in front, and a rounded impression on each side before the middle; elytra depressed, narrow at the base, as wide as the thorax, emarginate at the shoulders, widening a little to beyond the middle, then abruptly narrowed, and the apex a little produced and rounded, with a sharp marginal ridge turning inwards before the apex, a short sinuous dorsal ridge at the base, the suture a little raised, a distinct y-shaped elevation on each side about the middle, and several curved or transverse elevations behind, surface very finely and closely punctured; anterior tibiæ with a sharp tooth at outer apical angle; antennæ long, apparently 10-jointed, the eleventh joint short, very small, sunk in the tenth, and slightly rounded at apex, third to ninth decreasing in length, moniliform, all the joints with a few short, stout, projecting bristly hairs. Beneath very closely and finely granulose; epipleural fold narrow, rather distinct; intermediate coxal cavities almost closed externally, trochantin very small.

Length 8–9 millim.

Hab. Mexico (*coll. F. Bates*), Toluca (*Sallé*).

Var. **humeralis.**

Similar to *A. seticornis*, but a little larger, more densely clothed with (light brown) scales; the thorax more strongly rounded and sinuate at the sides, and the hind angles and central lobe a little more prominent; the humeri rounded and scarcely emarginate, &c.

Hab. Mexico, Toluca (*Sallé*).

This species, though differing greatly from typical *Astrotus* in the structure of the antennæ, is perhaps better placed here for the present; it may possibly form a new genus.

SICHARBAS.

Mentum transverse, completely filling the gular cavities, and contiguous to the mandibles; ligula hidden; last joint of maxillary palpi large, subtriangular; labrum transverse, prominent, passing the mandibles; epistoma broad, truncate in front; lateral margins of the front raised, a little swollen and rounded; antennæ with long bristly hairs, long, apparently 10-jointed, the last two joints subconnate, large, and slightly pointed at the apex, third twice as long as the second, fourth to ninth decreasing in length, and obconic; prothorax long, the hind angles much produced and lobiform; elytra subparallel, flattened nearly to the apex, then abruptly declivous, with the apex produced and rounded; epipleuræ vertical, broad, a little raised along the inner margin; intermediate coxal cavities open externally, trochantin visible, small; intercoxal process broad, subtruncate in front, slightly raised in the middle; tarsi with long silky hairs beneath, not sulcate; anterior tibiæ with a sharp tooth at outer apical angle.

Founded on a Mexican species captured long ago by Truqui. Somewhat allied to *Astrotus seticornis* in the structure of the antennæ, but I think generically distinct.

1. **Sicharbas lobatus.** (Tab. II. fig. 23.)

Elongate, rather convex, depressed above, dark reddish brown, densely clothed with light brown scales, slightly pubescent. Head with a slight longitudinal impression between the eyes; prothorax as long as broad, widest towards the front, widened from the anterior angles nearly to the middle, then suddenly narrowed to the base, the hind angles much produced, lobiform, rounded at the apex, curved a little outwardly, and overlapping the elytra, anterior angles a little produced and obtuse, base with a rounded central lobe, and

a circular emargination on each side near the angles, with an interrupted central channel, and a rounded impression on each side about the middle, the lateral margins raised towards the front, the surface finely rugulose and densely clothed with scales; elytra wider than the thorax, the sides almost straight, slightly widening from the obliquely truncated shoulders nearly to the apex, with a sharp, well-defined marginal ridge turning abruptly inwards before the apex and nearly reaching the suture, a dorsal ridge not reaching the middle, the suture raised, and a number of short, oblique, or transverse ridges more numerous and distinct behind, the incurved part of the marginal ridge angulate near the suture, the surface densely clothed with scales. Beneath opaque, densely and finely punctured.

Length 11 millim.

Hab. Mexico (*Truqui*).

One example.

OLOGLYPTUS.

Ologlyptus, Lacordaire, Gen. Col. v. p. 158 (1859); Lec. Class. Col. N. A. p. 221; Horn, Rev. Ten. N. Am. p. 289; Lec. & Horn, loc. cit. p. 370 (1883).

Pactostoma, Leconte, Journ. Acad. Phil. n. s. iv. p. 19.

Stenosides, Sol. Ann. Soc. Ent. Fr. v. p. 484 (1836).

A few species of this genus are known from the Southern United States and Mexico; I have followed Horn, Leconte, and others in adopting *Ologlyptus* in preference to *Stenosides*, for reasons stated by Lacordaire.

1. Ologlyptus anastomosis.

Asida anastomosis, Say, Journ. Acad. Phil. iii. p. 256 (1823)[1].

Pactostoma anastomosis, Lec. Journ. Ac. Phil. iv. p. 19 (1858); Col. Kansas, p. 13, t. 2. f. 11 (1859)[2].

Microschatia anastomosis, Lec. Proc. Acad. Phil. vi. p. 446.

Pelecyphorus anastomosis, Lec. Ann. Lyc. Nat. Hist. N. Y. v. p. 129.

Ologlyptus anastomosis, Lac. Gen. Atl. t. 52. f. 2; Gen. Col. v. p. 159[3] (1859); Horn, Rev. Ten. N. A. p. 290[4].

Hab. North America[3], Arkansas[1], Colorado[4], Kansas[2 4], New Mexico[2].—Mexico (*Sallé, coll. F. Bates*).

I have seen four examples from Mexico; these have the elevations of the elytra irregular and interrupted.

2. Ologlyptus graciliformis.

Stenosides graciliformis, Sol. Ann. Soc. Ent. Fr. v. p. 486, t. 12. f. 5–8 (1836)[1].

Hab. Mexico[1] (*Sallé*), Tehuacan, Oaxaca (*Höge*), Guadalupe (*Flohr*).

3. Ologlyptus canus.

Oblong ovate, rather convex, flattened above, black, densely clothed with yellowish-brown scales, slightly pubescent. Prothorax broader than long, strongly rounded at the sides, almost equally narrowed in front and behind, very feebly sinuate before the obtuse hind angles, front angles obtuse, and a little produced, base truncate, the surface with scattered punctures, and an indistinct smooth central line; elytra widened from the base to beyond the middle, then narrowed to apex, base narrower than the prothorax, subtruncate,

with scattered punctures and three ridges—a marginal and a dorsal ridge turning obliquely inwards towards the suture behind, where they become confluent, and enclose a shorter ridge.

Length 8 millim.

Hab. Mexico (*Sallé*).

One example. Labelled *Philolithus canus* in the Sallé collection.

4. **Ologlyptus sinuaticollis.** (Tab. II. fig. 19.)

Rather elongate, convex, black, densely clothed with brown earthy-looking scales, pubescent. Prothorax transverse, sides rounded, and a little narrowed and sinuate in front before the prominent produced anterior angles, narrowed and strongly sinuate behind before the rectangular hind angles, base subtruncate, dorsal surface with scattered coarse punctures; elytra with the sides rounded, widest about the middle, base almost truncate, and narrower than the thorax, humeral angles obtuse, with scattered impressions, and three ridges—a marginal and a dorsal ridge turning obliquely inwards towards the suture behind, where they become confluent, and enclose a shorter elevation.

Length 10 millim.

Hab. Mexico, San Luis Potosi (*Dr. Palmer*).

One example. Allied to *O. graciliformis*, but narrower, the elytra less widened behind, &c.

5. **Ologlyptus bicarinatus.** (Tab. II. fig. 18.)

Oblong oval, dull black, with scattered scaly hairs, pubescent. Head finely and sparingly punctured, transversely impressed in front; prothorax transverse, finely and sparingly punctured, the sides rounded, narrowed and sinuate behind, hind angles rectangular, a little narrowed in front and sinuate, the anterior angles rather prominent and acute, base broad, and subtruncate; elytra wider than the thorax at the base, rounded at the sides, widest about the middle, humeral angles obsolete and rounded, with two dorsal ridges—the first starting from near the shoulder, curving a little inwardly behind, the second shorter, not reaching the base, and a marginal ridge, these ridges obsolete a little before the apex, separate, and not confluent behind, between the first dorsal ridge and the suture there is a slight indication of another obsolete ridge, the surface with a few widely scattered fine punctures; anterior tibiæ with a short, blunt tooth at outer apical angle; anterior and intermediate tibiæ finely denticulate externally; femora coarsely punctured; tarsi with rather long hairs beneath; scutellum smooth; trochantin visible, small. Beneath closely and rather finely punctured.

Length 14 millim.

Hab. Mexico, Oaxaca (*Höge*).

One example. A species difficult to locate satisfactorily.

6. **Ologlyptus planatus.** (Tab. II. fig. 16.)

Oboval, depressed above, black, densely clothed with dark brown earthy-looking scales, slightly pubescent. Head transversely impressed towards the front; prothorax broader than long, broadest about the middle, the sides rounded, feebly emarginate before the obtuse hind angles, and a little narrowed in front and behind, anterior angles a little produced, base subtruncate, the surface with scattered fine indistinct raised points, and with a smooth central line; elytra much flattened to beyond the middle, abruptly declivous behind, gradually widening from the base to beyond the middle, then suddenly rounded with the apex a little produced, very feebly emarginate behind the obtuse humeral angles, base narrower than the prothorax, and almost truncate, with a marginal ridge starting from the shoulder and turning off towards

the suture before the apex, the surface flattened, with scattered shallow impressions and no trace of tubercles or ridges; antennæ with intermediate joints a little longer than broad; trochantin distinct.

Length 8–9 millim.

Hab. Mexico, Cuernavaca (*coll. F. Bates*).

Two examples.

ZAMOLXIS.

Labrum prominent, clasped by the mandibles, transverse, emarginate in front; mentum rather small, transverse, rounded at the sides in front, feebly emarginate, closely fitting into and filling up the gular cavities; side-pieces of the submentum produced into a long blunt tooth on each side; ligula entirely concealed; last joint of maxillary palpi broadly triangular, subsecuriform; antennæ with the third joint twice the length of the second, fourth to ninth decreasing in length, obconic, tenth broad, subtriangular, eleventh small, rounded at apex; intermediate coxal cavities open externally, trochantin prominent; prosternum declivous behind, rounded; intercoxal process broadly rounded in front; epipleuræ suddenly narrowed at each end and with a short fold at the apex; tarsi with long stiff hairs beneath, not sulcate; eyes transverse, short; thorax strongly dilated at the sides, hind angles quite obsolete; elytra rounded at the sides, costate; anterior tibiæ with a strong tooth at outer apical angle; scutellum subtriangular, coarsely punctured.

Founded on a single species from Mexico. Allied to *Asida*, and, like *Poliorcetes*, difficult to separate therefrom by good structural characters, though at first sight appearing very different.

1. **Zamolxis dilatatus.** (Tab. II. fig. 24.)

Oblong ovate, convex, somewhat depressed above, black, slightly shining. Head broad, transversely impressed in front, the lateral margins a little swollen and prominent, very coarsely punctured; prothorax transverse, much dilated at the sides, widest a little behind the middle, strongly narrowed behind, the hind angles obsolete, narrowed in front, and the anterior angles rounded and not produced or prominent, anterior margin slightly emarginate, base slightly rounded, the expanded lateral margins a little raised and strongly crenulate, the disc with coarse scattered punctures, the sides coarsely rugulose; elytra somewhat depressed, rounded at the sides, gradually widened from the base to beyond the middle, the apex a little produced, the humeral angles obtuse, the base emarginate, narrower than the thorax at the base, with three smooth ridges—a dorsal ridge distinct towards the base, a prominent ridge confluent with the first at the base and parallel with and confluent before the apex with the third or marginal ridge, the suture a little raised, and the surface with scattered coarse shallow rounded impressions. Beneath shining, coarsely punctured, the epipleuræ and ventral segments sparingly, the rest closely; mentum with some very coarse rounded impressions.

Length 17 millim.

Hab. Mexico, Puebla (*Sallé*).

Two examples.

POLIORCETES.

Mentum placed upon a broad peduncle, transverse, triangularly emarginate, nearly filling the gular cavities, not contiguous to the mandibles, the sides rounded in front; side-pieces of submentum prominent and produced into a broad triangular tooth on each side; last joint of the maxillary palpi securiform; labrum prominent and clasped by the mandibles; ligula almost hidden; antennæ with third joint more than twice as long as second, fourth to eighth decreasing in length, obconic, ninth larger and subtriangular, tenth transverse, very broad, eleventh small and rounded at the apex; prothorax transverse, anterior angles prominent; elytra flattened, swollen behind, with regular finely denticulated ridges; tarsi sulcate, and with fine hairs beneath; intercoxal process broadly rounded in front, slightly

concave, and the anterior margin raised; epipleuræ broad, with a short distinct ridge at the apex; intermediate coxal cavities open, trochantin prominent; scutellum transversely triangular, impunctate; anterior tibiæ with sharp tooth at outer apical angle; meso- and metasternum broad, prosternum comparatively narrow and slightly thickened and produced behind; scutellum broad, triangular.

I have founded this genus upon a single Mexican species. Closely allied to *Asida*. The elytra are much swollen behind and flattened, giving the insect very much the appearance of a *Platesthes*, from which, however, it differs in several important points; it is also allied to *Ologlyptus*, but differs in the structure of the palpi and coxal cavities.

1. **Poliorcetes platesthoides.** (Tab. II. fig. 25.)

Ovate, rather broad, depressed, dull, dark reddish brown. Head transversely impressed in front, with some scattered punctures, and a shallow indistinct groove between the eyes; prothorax transverse, the lateral margins rounded and crenulate, slightly expanded and reflexed, narrowed in front and behind, the anterior angles prominent, triangular, hind angles obtuse, the base almost truncate, the disc finely and sparingly punctured, the sides transversely rugulose, with a shallow indistinct central groove; elytra flattened, swollen behind, rounded at the sides, narrower than the thorax at the base, widened from the base to beyond the middle, then narrowed and the apex a little produced, base sinuate and emarginate on each side of the scutellum, humeral angles obsolete and rounded, with three finely denticulated prominent ridges—a dorsal (distant from the suture, curved, and almost parallel with the margin), and a marginal ridge, confluent before the apex, and enclosing a shorter ridge, the surface with fine widely scattered impressions. Beneath with the thorax and mesosternum coarsely punctured, the ventral segments and metasternum with fine widely scattered punctures, the mentum with some very coarse rounded impressions.

Length 14–18 millim.

Hab. Mexico, Ticomavaca (*Höge*).

Taken in plenty by Höge.

Group NYCTELIIDES.

This group will include *Psectrascelis* (a genus allied to *Nyctelia*), recorded from Mexico; the tribe Branchini of Horn and Leconte; and a genus of somewhat doubtful position.

PSECTRASCELIS.

Psectrascelis, Solier, Ann. Soc. Ent. Fr. 1836, p. 311, t. 6. f. 9–16; Lacord. Gen. Col. v. p. 170.

This is a South-American genus, found in Chili, Peru, and Bolivia; one species has been recorded from Mexico, but, as Lacordaire says, probably erroneously.

1. **Psectrascelis subdepressus.**

Psectrascelis subdepressus, Sol. loc. cit. p. 318[1].

Hab. Mexico[1]?

BRANCHUS.

Branchus, Leconte, Class. Col. N. America, part 1. p. 222 (1862); Horn, Rev. Ten. N. A. p. 291; (1870); Lec. & Horn, Class. Col. N. A. 1883, p. 371.

Three species are recorded of this genus—one from Florida, one from the island of

New Providence (Bahamas), and a third from Nicaragua; an allied genus (*Scotinus*) is found in Brazil.

1. **Branchus obscurus.** (Tab. III. fig. 20.)

Branchus obscurus, Horn, Proc. Acad. Phil. 1866, p. 398[1].

Hab. MEXICO (*coll. F. Bates*); GUATEMALA, near the city (*Champion*); NICARAGUA[1].

ANECTUS.

Anectus, Horn, Proc. Acad. Phil. 1866, p. 399; Rev. Ten. N. A. p. 291 (1870); Lec. & Horn, Class. Col. N. A. p. 371 (1883).

This genus is unknown to me.

1. **Anectus vestitus.**

Anectus vestitus, Horn, loc. cit. p. 399[1].

Hab. HONDURAS[1].

OXINTHAS.

Mentum broad, trapeziform, emarginate in front; gula with a distinct medial fissure; ligula not very prominent, emarginate in front; the base of the maxillæ exposed; maxillary palpi slightly dilated, last joint oval; labrum prominent, emarginate in front; antennæ rather thin, widening outwardly; head rather broad, sunk into the prothorax nearly to the eyes; epistoma emarginate in front; prothorax feebly bisinuate at the base, the hind angles not prolonged, closely embracing and as wide as the elytra, without distinct lateral margins; scutellum small; epipleuræ narrow, suddenly dilated at the base; intermediate coxæ with distinct trochantin, side-pieces reaching the cavities; prosternum horizontal, a little produced, and the apex rounded; mesosternum slightly concave in front; intercoxal process of abdomen broad, rounded in front; tibial spurs rather short and stout; anterior tibiæ slightly curved, outer apical angle rounded; tarsi stout, spinous beneath; first joint of hind tarsi short; body oval, convex, somewhat parallel; ventral segments without coriaceous hind margin.

This genus, difficult to locate satisfactorily, is, I think, best placed near *Branchus* and *Nyctelia*; the convex, somewhat parallel, form is suggestive of certain species of the South-American genus *Praocis* (*Anthrasomus*); but in structure it more nearly approaches the former. The short basal joint of the posterior tarsi, the epipleuræ dilated at the base, the less prominent ligula, &c. will separate it from the genera of the group Coniontides; the larger mentum and corneous hind margin to the ventral segments, from the succeeding groups.

1. **Oxinthas praocioides.** (Tab. III. fig. 23, ♀.)

Oval, convex, somewhat parallel, black, shining. Head with scattered coarsish punctures, the epistoma with a broad shallow impression; thorax a little broader than long, about as wide as the elytra, the sides rounded and slightly sinuous before the base, the hind angles subrectangular, anterior angles not very prominent and obtuse, with scattered fine punctures; elytra about twice the length of the thorax (♀), less than twice as long (♂), scarcely wider than the thorax, the humeri slightly swollen and prominent, with coarse scattered punctures (much coarser than those of the thorax), the suture with some finer punctures more numerous and distinct towards the apex. Beneath with coarse scattered impressions;

the ventral segments smoother, the sides and apex only with coarse punctures; mentum very coarsely punctured, and with a distinct central groove.
Length 12 millim. (♂ ♀.)

Hab. MEXICO, Tehuantepec (*Sallé*).

Two examples. The thorax in the male of this species is much longer than in the female, and the elytra are scarcely twice the length of the thorax; the female is less parallel in form, the thorax transverse, and the elytra twice the length of the thorax.

Group CRYPTOGLOSSIDES.

This group will contain two closely allied genera (*Cryptoglossa* and *Centrioptera*) peculiar to the South-western United States and Mexico; another genus (*Schizillus*) occurs a little to the north of our boundary.

CRYPTOGLOSSA.

Cryptoglossa, Solier, Ann. Soc. Ent. Fr. v. p. 680 (1836); Lac. Gen. Col. v. p. 138; Horn, Rev. Ten. N. A. p. 280; Lec. & Horn, Class. Col. N. A. p. 368.
Asbolus, Lec. Ann. Lyc. New York, v. p. 129.

Four species are now known of this genus, all of which inhabit Northern Mexico and the country adjacent to our northern frontier.

1. Cryptoglossa bicostata.

Cryptoglossa bicostata, Sol. loc. cit. p. 681, t. 24. f. 15[1].

Hab. MEXICO[1].

I have not seen this species, described by Solier from a single mutilated example.

2. Cryptoglossa verrucosa.

Asbolus verrucosus, Lec. Ann. Lyc. New York, v. p. 129[1].
Cryptoglossa verrucosa, Horn, Rev. Ten. N. A. p. 280[2].

Hab. NORTH AMERICA, deserts of the river Colorado[1], Valley of the river Gila[2].

Found abundantly under dead *Yuccas* along the Rio Gila and just on our northern boundary.

3. Cryptoglossa mexicana. (Tab. III. fig. 21.)

Opaque, black. Head with a few fine scattered punctures along the anterior margin; prothorax moderately convex, widened towards the front, the anterior angles very prominent and triangular, the hind angles a little produced, impunctate; elytra a little broader than the thorax at the base, moderately convex, with rows of shallow rounded impressions which become obsolete behind the middle, and a few scattered raised points at the base; mentum coarsely and rather closely punctured.
Length 17–19 millim.

Hab. MEXICO, Monclova in Coahuila (*Dr. Palmer*).

Six examples. Near *C. lævis*, Lec.; opaque, broader, and less convex; the thorax broader, wider in front, flatter and less convex, and the anterior angles more produced;

the elytra less convex, broader at the base and less rounded at the sides, and with rows of shallow punctures towards the base.

CENTRIOPTERA.

Centrioptera, Mann. Bull. Mosc. ii. 1843, p. 279; id. Mag. de Zool., 1843, Ins. t. 126; Lac. Gen. Col. v. p. 136; Horn, Rev. Ten. N. A. p. 278; Lec. & Horn, Class. Col. N. A. p. 368.
Oochila, Lec. Class. Col. N. A. p. 220.
Asbolus, Lec. (part).

Seven species are known of this North-American genus; one is also found in Mexico, and another just on our northern boundary; the remainder are peculiar to Texas, Lower California, and Arizona.

1. **Centrioptera caraboides.**

Centrioptera caraboides, Mann. loc. cit. p. 280[1]; id. Mag. Zool. loc. cit.; Horn, Rev. Ten. N. A. p. 280.

Hab. North America, California[1].—Mexico, Puebla (*Sallé*).

An example in the Sallé collection agrees very well with Mannerheim's description and figure. *C. spiculifera,* if the specimens in Mr. F. Bates's collection are correctly named, is not identical with this species.

2. **Centrioptera muricata.**

Centrioptera muricata, Lec. Ann. Lyc. New York, v. p. 142[1]; Horn, Rev. Ten. N. A. p. 279[2].

Hab. North America, deserts of the Colorado[1 2] and Gila rivers[2].

Group **CONIONTIDES.**

This group is represented, as yet, by one genus (*Eusattus*) only in Central America. Allied genera are found in North America—*Coniontis* in California and Oregon, *Cœlus* on the coast of California, and *Cœlotaxis* peculiar to Guadalupe Island west of the peninsula of Lower California.

EUSATTUS.

Eusattus, Leconte, Ann. Lyc. New York, v. p. 131 (1852); Horn, Rev. Ten. N. Am. p. 292; Lec. & Horn, Class. Col. N. A. p. 371.
Discodemus, Lec. Class. Col. N. A. p. 223.
Conipinus, Lec. loc. cit. p. 223.

A North-American genus, found in Kansas, Arizona, California, Oregon, Colorado, New Mexico, &c., and extending also into Mexico. Four species only are known as

yet from Mexico; others probably remain to be discovered in the northern part of that country.

The different species are found under stones.

1. **Eusattus nitidipennis.** (Tab. III. fig. 22.)

Eusattus nitidipennis, Lec. Ann. Lyc. New York, v. p. 133 (nota)[1]; New Sp. Col. p. 112; Horn, Rev. Ten. N. A. p. 294.

Hab. MEXICO, Jalapa[1] (*Haldeman*), Guanajuato (*coll. Sallé*).

In this species the elytra are inflated, rounded on the sides, and not margined, broadest a little before the apex, and covered with fine shallow widely scattered punctures; the surface glabrous and slightly shining.

2. **Eusattus brevis.**

Smaller, shorter, and duller than *E. nitidipennis*; the thorax more rounded at the sides; the elytra shorter and less inflated, irregularly wrinkled and covered with scattered coarsish punctures, rarely obsoletely costate; the epipleuræ formed as in that species. The upper surface in fresh specimens covered with a sort of short pubescence.

Length 10 millim.

Hab. MEXICO, Esperanza (*Höge*).

Captured in great abundance by Höge.

3. **Eusattus dubius.**

Eusattus dubius, Lec. Ann. Lyc. New York, v. p. 132[1]; Horn, Rev. Ten. N. A. p. 294[2].

Hab. NORTH AMERICA, deserts of the Colorado and Gila rivers[1 2].

Found just on our northern boundary.

4. **Eusattus depressus.** (Tab. IV. fig. 1.)

Broad oval, depressed above, somewhat parallel, dull black, glabrous. Head coarsely and closely punctured, the epistoma very feebly emarginate in front; prothorax comparatively rather long, rather broad in front, the anterior angles prominent but obtuse, the sides feebly sinuate before the base, smooth; elytra somewhat parallel, the disc depressed, strongly depressed transversely at the base, rounded on the sides, the epipleuræ gradually and broadly widening to, and very sharply defined at, the base, the dividing carina meeting the hind angles of the thorax and visible from above, with a few scattered fine shallow wrinkles or impressions, almost smooth; anterior tibiæ produced into a very stout blunt tooth at the outer apical angle, rather coarsely punctured above; prosternum coarsely punctured, horizontal, the apex broad and rounded.

Length 13 millim.

Hab. MEXICO, Alamos (*Buchan-Hepburn*).

One example. Of a different facies from any other *Eusattus* known to me.

Subfam. *TENEBRIONINÆ.*

With this subfamily we commence a series of species in which the hind margins of the third and fourth ventral segments are more or less coriaceous, the intermediate coxæ usually with a distinct trochantin.

We adopt in great part, as with the Tentyriinæ, the arrangement used by Dr. Horn for the North-American species, the Central-American Tenebrionidæ, so far as at present treated, partaking very largely of the character of the fauna of that region.

No species of the tribe Amphidorini has yet been received from our country; the three North-American genera (*Amphidora*, *Cratidus*, and *Stenotrichus*) are found in Arizona and California.

Group **BLAPTIDES.**

This group will include *Elæodes* only. Allied genera (*Embaphion*, *Trogloderus*, and *Discogenia*) are found in North America.

ELÆODES.

Eleodes, Eschscholtz, Zool. Atlas, iii. p. 9 (1829); Solier, Studi Ent. p. 235; Lacord. Gen. Col. v. p. 148; Lec. Class. Col. N. A. p. 225; Horn, Rev. Ten. N. A. p. 301; Lec. & Horn, Class. Col. N. A. p. 374.

Xysta, Eschsch. loc. cit. p. 9; Guérin, Mag. Zool. 1834, Mélasomes, p. 30.

Promus, Leconte, Class. Col. N. A. p. 226.

Blapylis, Horn, Rev. Ten. N. A. p. 315.

Elæodes, Gemm. & Harold, Cat. vii. p. 168.

Upwards of 100 species are placed under this genus in Gemminger and Harold's catalogue—twenty-six from Mexico, the remainder from North America. Seven Mexican species (not included in the above catalogue) were described by Say in 1835 in the 'Boston Journal of Natural History;' some of these are probably identical with others subsequently described by Solier, and included under other names in Gemminger's list. Dr. Horn, in his 'Revision of the Tenebrionidæ of America north of Mexico,' gives forty-six species as inhabiting the United States: this author here sinks, as synonyms or varieties, nearly one third of the previously recorded North-American species.

It is quite impossible, without comparison with the actual types, to identify many of the Mexican species described by Say and Eschscholtz; the correct determination in consequence, from description only, of some of the species of these authors is doubtful. To increase the difficulty of satisfactorily determining or separating the numerous species of this genus, the shape of the thorax, the structure of the femora, tarsi, &c. is not always symmetrical or constant, and sometimes different on one side of the body from the other. Aberrations of this kind are frequent in the Tenebrionidæ.

We have now to record fifty-two species from Central America, all from Mexico, one only extending into the highlands of Northern Guatemala, the southern limit of the genus; ten of these species also inhabit the country adjacent to our northern frontier.

Allowing for some few doubtful species, to be eliminated when those described by the older authors are properly identified, Mexico will possess about the same number of species as the United States.

Elæodes is the representative of *Blaps* in North America, ranging from Hudson's Bay and Vancouver Island to the "Los Altos" region of Guatemala; the different species are almost confined to the western side of the continent and to the country west of the Rocky Mountains, extending eastward only as far as the Mississippi River. They are found beneath stones, &c. in great abundance in the arid regions of California, Arizona, New Mexico, Colorado, Texas, and Mexico; species are found from the sea-coast up to an elevation of nearly 11,000 feet.

In South America *Elæodes* is replaced by *Nycterinus* *, an allied genus found in Chili.

1. *The basal joints of the anterior tarsi in the male clothed with stout, almost spiny, hairs beneath, and scarcely dilated.* (ELEODES, Horn.)

A. *Anterior femora in the male toothed; in the female bluntly toothed, or emarginate near the apex.*

a. *Elytra in the male with long caudal appendages, in the female subcaudate.*

1. **Elæodes rugosa.**

Eleodes rugosa, Perbosc, Rev. Zool. 1839, p. 263[1].
Eleodes caudata, Sol. Studi Ent. p. 255[2].
Eleodes rugipennis, Chevr. in litt.

Hab. MEXICO[2], Vera Cruz[1] (*Sallé*), Jalapa (*Höge*).

Sent in numbers by Höge. These examples vary in size from 22–31 millim. A species with long caudal appendages to the elytra in the male, the upper surface coarsely rugulose.

2. **Elæodes eschscholtzi.** (Tab. III. fig. 24, ♂.)

Eleodes eschscholtzi, Sol. Studi Ent. p. 254[1].

Hab. MEXICO[1], Alamos (*Buchan-Hepburn*), Presidio (*Forrer*).

Five examples (four males, one female); the largest male measures 35 millim. (including the caudal appendages of 6 millim.). In this species the posterior tibiæ of the male are curved and thin from the base to beyond the middle, and straight and thickened towards the apex, a character not mentioned by Solier.

b. *Elytra feebly caudate in both sexes.*

3. **Elæodes spinipes.** (Tab. IV. fig. 2, ♂.)

Eleodes spinipes, Sol. Studi Ent. p. 253[1].
Eleodes blaptoides, Dupont in litt.

* *Nycterinus ebeninus,* Sol. (Studi Ent. p. 269), is recorded from Mexico; the locality is probably in error for Chili.

Hab. Mexico[1] (*coll. F. Bates*), Guanajuato (*coll. Sallé*); San Pedro in Coahuila, Hacienda de Bleados, San Luis Potosi (*Dr. Palmer*).

The ten specimens I refer to this species differ from others I refer to *E. blaptoides*, Eschsch., in having the thorax less rounded at the sides, less constricted at the base, and less transverse. The males somewhat elongate; the elytra broader at the base and more attenuate at the apex than in the female. The anterior femora in the male with a strong curved tooth, in the female sinuate near the apex; the elytra obsoletely or distinctly punctate-striate and subcaudate in both sexes. The examples from San Luis Potosi are more shining, the striæ more deeply impressed, and the interstices in some specimens slightly convex, and each with a row of punctures.

Named *E. eschscholtzi*, Sol., in the Sallé collection; the elytra in the male, however, are not strongly caudate as in that species.

4. Elæodes ventricosa.

Eleodes ventricosa, Lec. Proc. Acad. Phil. 1858, p. 186[1]; Horn, Rev. Ten. N. A. p. 311.

Hab. North America, near the Rio Grande in Texas[1].—Mexico (*coll. F. Bates*).

5. Elæodes blaptoides.

Eleodes blapoides, Eschsch. Zool. Atlas, iii. p. 12[1]; Dej. Cat. 3rd ed. p. 209.

Hab. Mexico[1] (*coll. F. Bates*), Yolos (*Sallé*).

I refer, somewhat doubtfully, three female examples to this species. These specimens have the anterior femora on the inner side strongly sinuate near the apex, thus forming a short blunt tooth; the thorax transverse, convex, strongly rounded at the sides, somewhat constricted at the base, the anterior angles somewhat acute and projecting forwards (the anterior margin appearing deeply emarginate), the base subtruncate and indistinctly margined within; the elytra subcaudate at the apex, obsoletely or distinctly punctate-striate, the interstices flat, with rows of finer muricate punctures.

6. Elæodes exarata. (Tab. IV. fig. 3, ♀.)

Obovate, black, subopaque. Head with scattered fine punctures; prothorax transverse, moderately convex, widest in the middle, about equally narrowed at the base and apex, the anterior angles prominent and divergent though not acute, hind angles subrectangular, almost imperceptibly punctate, the base nearly straight; elytra rather convex, somewhat ventricose, rounded at the sides, broadest beyond the middle, the apices feebly caudate, deeply sulcate, the striæ with fine muricate punctures, the interstices with fine scattered punctures and slightly shining, the base slightly raised and the humeri distinct. Beneath shining; the prosternum strongly declivous behind, the apex produced into a short blunt tooth; the anterior femora emarginate near the apex; the spurs of the anterior tibiæ subequal; anterior tarsi somewhat densely clothed with hairs beneath.

Length 19–20 millim. (♀.)

Hab. Mexico, Hacienda de Bleados, San Luis Potosi (*Dr. Palmer*).

Two female examples. I know of no near ally to this species.

7. Elæodes hispilabris.

Blaps hispilabris, Say, Journ. Acad. Phil. iii. p. 260[1]; Am. Ent. f. 16; Lec. Complete Writings of Thomas Say, ii. p. 152.
Eleodes hispilabris, Horn, Rev. Ten. N. A. p. 313[2].
Eleodes sulcata, Lec. Proc. Acad. Phil. 1852, p. 67[3]; loc. cit. 1858, p. 181.
Eleodes convexa, Lec. Pacif. R. R. Reports, App. I. p. 49.
? *Eleodes nupta*, Lec. Proc. Acad. Phil. 1858, p. 183.
Eleodes lecontei, Harold, Col. Heft. vi. p. 122.

Hab. North America, Missouri[1 3], Oregon, Arizona, Kansas, Colorado, and Texas[2]. —Mexico, Northern Sonora (*Morrison*).

The specimens sent by Mr. Morrison have the elytra very deeply sulcate, though otherwise agreeing with examples from Colorado, &c.

8. Elæodes gracilis.

Eleodes gracilis, Lec. Proc. Acad. Phil. 1858, p. 184[1]; Horn, Rev. Ten. N. A. p. 312[2].

Hab. North America, New Mexico, Arizona, and upper end of the peninsula of Lower California[2].—Mexico, Sonora[1] (*Morrison*).

c. *Elytra rounded at the apex.*

9. Elæodes obscura.

Blaps obscura, Say, Journ. Acad. Phil. iii. p. 259; Lec. Complete Writings of Thomas Say, i. p. 32[1].
Eleodes obscura, Lec. Proc. Acad. Phil. 1858, p. 181; Horn, Rev. Ten. N. A. p. 305[2].
Eleodes dispersa, Lec. loc. cit. p. 182[3]; Horn, loc. cit. p. 305[4].
Eleodes deleta, Lec. loc. cit. p. 182[5]; Horn, loc. cit. p. 305.
Eleodes sulcipennis, Mann. Beitr. 226; Mag. Zool. 1843, Ins. f. 128; Lec. loc. cit. p. 182; Horn, loc. cit. p. 306[6].
Eleodes arata, Lec. loc. cit. p. 132[7]; Horn, loc. cit. p. 306.

Hab. North America, river Platte[1], Creek boundary[3], New Mexico[4 5 6 7], Oregon[6], Nebraska[2], Colorado[2 6], Northern California[6], Nevada[6], Arizona[6].—Mexico, Northern Sonora (*Morrison*).

The specimens recently sent by Mr. Morrison from Sonora of this, one of the largest species of the genus, belong to the form *E. sulcipennis*.

10. Elæodes extricata.

Blaps extricata, Say, Journ. Acad. Phil. iii. p. 261[1]; Lec. Complete Writings of Thomas Say, ii. p. 153.
Eleodes extricata, Lec. Proc. Acad. Phil. 1858, p. 181; Horn, Rev. Ten. N. A. p. 309[2].
Eleodes cognata, Hald. Stans. Expl., App. C, p. 376 (1852).

Hab. North America, Arkansas[1], Utah, Eastern Oregon, plains of Kansas and Nebraska[2].—Mexico, Northern Sonora (*Morrison*), Monclova in Coahuila (*Dr. Palmer*).

B. *Anterior femora unarmed in both sexes; elytra rounded at the apex.*

* *Upper spur of the anterior tibiæ in the female longer and stouter than the lower spur.*

11. Elæodes quadricollis.

Eleodes quadricollis, Eschsch. Zool. Atlas, iii. p. 12, t. 14. f. 5 [1]; Mann. Beitr. p. 268; Lec. Proc. Acad. Phil. 1858, p. 181; Horn, Rev. Ten. N. A. p. 308 [2].
Eleodes omissa, Lec. Proc. Acad. Phil. 1858, p. 186 [3].
Eleodes vicina, Lec. Ann. Lyc. New York, v. p. 133 [4].

Hab. North America, California coast from San Francisco [1 2 3] to San Diego [2], and inland from San José to Tejon [2], Rio Gila [4].—Mexico, Sonora [2].

I have not seen Mexican specimens of *E. quadricollis.* In this species the upper spur of the anterior tibiæ of the female is in some specimens very long and very much stouter and longer than the lower spur.

12. Elæodes humeralis.

Eleodes humeralis, Lec. Pac. R. R. Surv. 47th parallel, App. I. p. 50; Proc. Acad. Phil. 1858, p. 182; Horn, Rev. Ten. N. A. p. 309 [1].
Eleodes punctipennis, Chevr. in litt.

Hab. North America, Northern California and Oregon [1].—? Mexico (*coll. F. Bates,* ex. *Boucard*).

There is an example of this species in Mr. F. Bates's collection labelled as from Mexico; possibly there is some mistake about the locality.

13. Elæodes alutacea.

Eleodes alutacea, Sol. Studi Ent. p. 240 [1]; Klug in litt. (♀).
Eleodes nitidithorax, Chevr. in litt. (♂).
Eleodes maillei, Sol. loc. cit. p. 247 [2].
Eleodes subpunctata, Sturm, in litt. (♀).
Eleodes punctipennis, Sturm, in litt. (♂).
Eleodes ellipticus, Sturm, in litt. (♀).
Eleodes sommeri, Dej. in litt.
Eleodes rugipennis, Chevr. in litt.
? ♀ *Blaps æqualis,* Say, Bost. Journ. Nat. Hist. i. pp. 151 [3]–203; Lec. Complete Writings of Thomas Say, ii. p. 657.
Var. ? *Blaps obliterata* [4], Say, loc. cit. p. 657.

Hab. Mexico [1 2 3 4] (*coll. F. Bates*), Puebla, Toluca (*Sallé*), Oaxaca (*Höge*), Ciudad in Durango (*Forrer*).

Rather common in Mexico. *E. maillei,* Sol., is probably not really distinct from *E. alutacea*; it differs in having the elytra more coarsely, confusedly, and almost

rugulosely punctured, and the disc (sometimes) a little more depressed; intermediate forms occur.

E. æqualis, *E. obliterata*, and *E. sommeri* are probably smooth forms of this variable species.

14. Elæodes elongatula.

Eleodes elongatula, Eschsch. Zool. Atlas, iii. p. 13[1]; Klug, Dej. Cat. 3rd edit. p. 210 (nec Solier).

Hab. Mexico[1].

This species, judging from the description ("Atra, thorace quadrato, antice latiore punctulato; elytris dorso deplanatis, profunde punctato-striatis; tibiis anterioribus incurvis; labro rotundo; long. 5½ lin."), is perhaps identical with *E. alutacea*, Sol., ♂.

15. Elæodes maura. (Tab. IV. figg. 4 ♂, 5 ♀.)

? *Blaps maura*, Say, Bost. Journ. Nat. Hist. i. pp. 151–203[1]; Lec. Complete Writings of Thomas Say, ii. p. 656.

Eleodes elongatula, Sol. Studi Ent. p. 242[2] (nec Eschsch.).

A little larger, longer, and duller than *E. alutacea*, the male differing as follows:—The prothorax less constricted towards the base, almost equally narrowed at base and apex, widest in the middle, the base slightly rounded, smooth, and almost impunctate; elytra longer, a little less attenuate towards the apex, with traces of shallow obsolete grooves, smooth, or with scattered fine punctures, sometimes finely punctate-striate. The female larger and broader than the female of that species; legs stouter in both sexes.

Length 14–18 millim. (♂ ♀.)

Hab. Mexico[1,2], San Antonio de Arriba, Guanajuato, Parada (*Sallé*), Esperanza (*Höge*).

Sent in plenty by Höge. Labelled as above in the Sallé collection; it is perhaps the *Blaps maura*, Say. This species is also allied to *E. quadricollis*, but smaller, flatter, and less convex; the thorax broader and more transverse; the female comparatively shorter in form.

16. Elæodes scapularis.

Blaps lævigata, Sturm, in litt. (♂).

Oblong ovate, convex, black, shining. Head sparingly and somewhat coarsely punctured; prothorax transverse, moderately convex, rounded at the sides, about equally narrowed at base and apex, widest about or a little before the middle, feebly emarginate in front, the anterior angles rounded or obtuse, the base rounded, hind angles obtuse, smooth or with traces of fine scattered punctures; elytra in the male somewhat elongate, broader and more rounded at the sides in the female, feebly sinuate near the base, widest about the middle, the base broadly emarginate, humeri prominent and almost meeting the hind angles of the thorax, smooth or with indistinct fine scattered punctures and transverse wrinkles; anterior femora unarmed in both sexes; upper spur of the anterior tibiæ in the female longer and stouter than the lower spur; anterior tarsi in the male clothed with short stout spiny hairs beneath; prosternum produced behind into a short horizontal projection.

Length 13–16 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates, Sallé, ex coll. Sturm*), Toluca, Guanajuato (*Sallé*).

Nine examples. This species may be known from its allies by the somewhat rounded base of the thorax and prominent humeri; the disc of the elytra in the male is sometimes a little depressed. *E. scapularis* is best placed near *E. maura*.

17. **Elæodes rotundicollis.** (Tab. IV. figg. 6 ♂, 7 ♀.)

? *Eleodes rotundicollis*, Eschsch. Zool. Atlas, iii. p. 9[1]; Dej. Cat. 3rd edit. p. 209.

? ♂ *Blaps parva*, Say, Bost. Journ. Nat. Hist. i. pp. 151–203[2]; Lec. Complete Writings of Thomas Say, ii. p. 658.

Eleodes picipes, Deyr. in litt.

Hab. Mexico[1 2] (*coll. F. Bates*), Volcan de Orizaba (*Sallé*), Tehuacan, Las Vigas, Jalapa, Esperanza (*Höge*).

Sent in plenty by Höge. The specimens I refer to this species differ from *E. alutacea* in having the thorax more transverse, more strongly rounded at the sides, more narrowed towards the base, the greatest breadth a little before the middle; the elytra a little more narrowed towards the base, more rounded at the sides, and with regular rows of rather coarse or fine punctures, the interstices with scattered finer impressions; the first joint of the anterior tarsi of the female produced beneath into a blunt tooth almost as long and stout as the upper tibial spur.

18. **Elæodes connata.**

Eleodes connata, Sol. Studi Ent. p. 243.

Eleodes brevis, Sturm, in litt.

Hab. Mexico (*coll. Sturm*), Toluca (*coll. F. Bates*), San Andres, Puebla, Toluca (*Sallé*), Las Vigas (*Höge*).

This distinct little species seems to be pretty common, and contained in most Mexican collections.

19. **Elæodes curta.** (Tab. IV. fig. 8, ♂.)

Short ovate, moderately convex, flattened above, black, shining. Head with some very fine scattered punctures; prothorax a little broader than long (♂), transverse (♀), subcordiform, flattened above, the sides rounded from about the middle to the obtuse front angles and constricted before the base, the hind angles rectangular, base truncate, with scattered exceedingly fine punctures; elytra broader than the thorax at the base, flattened on the disc, with indistinct rows of fine distant punctures, distinct towards the base, obsolete at the sides and before the apex, the interstices with a few scattered finer impressions; anterior tarsi of the male with the basal joints stout and rather thickly clothed with hair beneath; upper spur of the anterior tibiæ longer and stouter than the lower; anterior femora unarmed.

Length 10–11 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Toluca (*Sallé*).

Three specimens. Allied to *E. connata*, Sol., but larger and broader; the thorax more constricted behind, the upper surface much more finely punctured, the basal joints of the anterior tarsi stouter and more thickly clothed with hair beneath.

20. **Elæodes carbonaria.**

Blaps carbonaria, Say, Journ. Acad. Phil. iii. p. 260 (1823); Lec. Complete Writings of Thomas Say, ii. p. 152.

Eleodes carbonaria, Lec. Proc. Acad. Phil. 1858, p. 181; Horn, Rev. Ten. N. A. p. 308[1].

Eleodes soror, Lec. loc. cit. p. 185[2].

Eleodes immunis, Lec. loc. cit. p. 186[3].

Var. *Eleodes debilis,* Lec. loc. cit. p. 185[4].

Hab. North America, Southern Colorado[1], Eastern Arizona[1], New Mexico[1], Santa Fé[4], Texas[1 2].—Mexico, Sonora[3] (*Dr. Webb, Morrison*).

21. **Elæodes sulcatula.** (Tab. IV. fig. 9.)

Oblong ovate, rather broad and depressed, black, shining. Head with some scattered coarsish punctures; prothorax broad, transverse, rather flat, strongly rounded at the sides, widest a little before the middle, slightly narrowed towards the base, feebly emarginate in front, lateral margins distinct and slightly raised, anterior angles rounded and not prominent, hind angles obtuse, smooth and almost impunctate; elytra rather broad, depressed, a little wider than the thorax at the base, feebly rounded at the sides, somewhat deeply sulcate, the striæ feebly and shallowly punctate, the interstices smooth and feebly convex; anterior femora swollen in the middle; anterior tibiæ slightly curved; spurs of all the tibiæ long and stout; tarsi clothed with stout spiny hairs beneath.

Length 18 millim.

Hab. Mexico (*Sallé*).

One example. *E. sulcatula* may be known by its depressed, broad, and somewhat parallel form and sulcate elytra. Labelled *E. melanaria*, Sol., in the Sallé collection, but not agreeing with the description of that species.

22. **Elæodes dilaticollis.** (Tab. IV. fig. 10, ♀.)

Oblong ovate, not very convex, black, shining. Head with fine scattered punctures, the vertex smoother, the epistoma separated from the front by a distinct transverse line; prothorax transverse, as broad as the elytra, the sides somewhat dilated and strongly rounded, widest about the middle, a little narrower at the base than at the apex, strongly emarginate in front, the anterior angles broad though not acute, hind angles obtuse, the base nearly straight, the disc slightly raised in centre of anterior margin, smooth, with a few scattered very fine punctures along the sides and near the anterior angles; elytra a little wider than the thorax at the base, the sides slightly rounded, not wider in the widest part than the thorax, the humeri indistinct, with scattered very fine punctures and no traces of striæ; anterior tibiæ slightly curved, the upper spur distinctly longer than the lower; anterior femora swollen and feebly sinuate towards the apex; anterior tarsi somewhat densely clothed with spiny hairs beneath.

Length 17 millim. (♀.)

Hab. Mexico, Guanajuato (*Sallé*).

One example. This species may be known by its comparatively large and dilated thorax.

** *Anterior tibial spurs in the female subequal.*

23. **Elæodes longicollis.**

Eleodes longicollis, Lec. Ann. Lyc. New York, v. p. 134[1]; Proc. Acad. Phil. 1858, p. 181; Horn, Rev. Ten. N. A. p. 311[2].

Eleodes haydenii, Lec. Proc. Acad. Phil. 1858, p. 186[3].

Hab. North America, river Gila[1], New Mexico[2], Arizona[2], Kansas[2], Colorado[2], river Platte[3].—Mexico, Northern Sonora (*Morrison*), San Luis Potosi, Hacienda de Bleados, Parras, and San Pedro in Coahuila (*Dr. Palmer*).

The specimens sent by Dr. Palmer have the elytra distinctly but finely punctate-striate; but intermediate forms occur, and I prefer to consider them as merely varieties of *E. longicollis*.

24. **Elæodes ponderosa.** (Tab. IV. fig. 11, ♂.)

Oblong ovate, very convex, black, shining. Head with some fine scattered punctures; prothorax strongly convex, a little broader than long, widest in the middle, about equally narrowed at base and apex, the sides rounded, feebly sinuate just behind the obtuse anterior angles, hind angles obtuse, with exceedingly fine scattered punctures; elytra somewhat elongate and attenuate in the male, shorter and more strongly rounded at the sides in the female, smooth or with scattered very fine punctures, sometimes with indications of shallow longitudinal grooves; legs stout in the male; anterior femora unarmed in both sexes; spurs of the anterior tibiæ subequal; prosternum horizontal and produced behind into a short blunt tooth, rarely rounded and declivous behind.

Length 18–28 millim. (♂ ♀.)

Hab. Mexico, Oaxaca, Tehuacan (*Höge*), Yolos, Oaxaca (*Sallé*).

Var. The thorax slightly constricted towards the base, the hind angles in consequence a little more prominent; the prosternum rounded and declivous behind.

Length 19–20 millim. (♀.)

Hab. Mexico, Presidio (*Forrer*).

A large convex species allied to *E. longicollis* and *E. gigantea*; from the former it may be known by its differently shaped thorax and less fusiform outline; from the latter by its comparatively shorter form and the less prominent anterior angles of the thorax. *E. ponderosa* varies greatly in size and even in shape; the legs are very stout, especially in the male, in large examples, thinner in smaller specimens. Small females are often very puzzling; the variety from Presidio is probably not distinct from *E. ponderosa*. Sent in plenty by Höge.

25. **Elæodes ruida.** (Tab. III. fig. 25, ♂.)

Blaps ruida, Say, Bost. Journ. Nat. Hist. i. pp. 151–203 (1835)[1]; Lec. Complete Writings of Thomas Say, ii. p. 656.

Eleodes coriacea, Sol. Studi Ent. p. 249[2].

Eleodes rugulosa, Dup. in litt.

Eleodes rugosa, Sturm, in litt.

Hab. Mexico [1 2] (*Sallé, ex coll. Sturm*), Puebla (*coll. F. Bates, Sallé*), Jalapa, Esperanza (*Höge*).

In most collections. This species may be known by its large size, elongate form, the exceedingly rugulose sculpture of the upper surface, and the femora unarmed in both sexes.

26. **Elæodes glabricollis.**

Of the form of *E. coriacea*, Sol., and the elytra sculptured as in that species; the head and thorax almost impunctate, with exceedingly fine scattered punctures.

Length 20–25 millim. (♀.)

Hab. Mexico (*coll. F. Bates*), San Luis Potosi (*Dr. Palmer*).

Two female examples. Possibly a form of *E. coriacea*; from *E. longicollis*, apart from its rugulose elytra, it may be known by the sides of the thorax being more equally rounded, the base and apex of equal width.

27. **Elæodes angusta.** (Tab. IV. fig. 12, ♂.)

Eleodes angusta, Eschsch. Zool. Atlas, iii. p. 13; Sol. Studi Ent. p. 248.
Eleodes angustata, Klug, Dej. Cat. 3rd ed. p. 209.
Eleodes elongata, Sturm, in litt.
Eleodes cadaverina, Chevr. Dej. Cat. loc. cit.

Hab. Mexico (*coll. Sturm, F. Bates*), San Andres, Guanajuato, Toluca (*Sallé*), Esperanza, Jalapa, Tehuacan, Oaxaca (*Höge*).

A common species in Mexico, and sent by Höge in great numbers. Specimens frequently occur of a reddish-brown colour and with red legs.

28. **Elæodes sonoræ.** (Tab. IV. fig. 13, ♂.)

Oblong ovate, strongly convex, black, shining. Head sparingly and rather coarsely punctured; prothorax as long as broad, very convex, moderately rounded at the sides, about as wide at base as at apex, anterior angles obtuse and slightly prominent, the sides very feebly sinuate near the base and apex, the base slightly rounded, shining, smooth, with a few very fine scattered punctures; elytra comparatively short (compared with the length of the thorax), a little wider than the thorax at the base, the sides slightly rounded, widening but little from the base, the base broadly but feebly emarginate, with regular rows of fine approximate punctures, the interstices flat and each with a row of punctures similar to those of the striæ, duller and less shining than the thorax; anterior femora unarmed; anterior tibial spurs subequal; anterior tarsi clothed with spiny hairs beneath; prosternum with a short horizontal projection behind.

Length 13 millim. (♂.)

Hab. Mexico, Northern Sonora (*Morrison*).

One example. This small distinct species may be recognized by its comparatively very long, smooth, shining thorax and the close and regular rows of fine punctures on the elytra; the punctures of the interstices similar to those of the striæ.

29. **Elæodes chihuahuensis.** (Tab. IV. fig. 14, ♀.)

Elongate oval, not very convex, subopaque, black. Head somewhat coarsely and closely punctured; prothorax a little broader than long, feebly convex, subquadrate, widest a little before the middle, slightly narrowed towards the base, sides feebly rounded and slightly sinuate near the angles, distinctly margined, anterior angles almost rounded, hind angles obtuse, with a distinct fine scattered punctuation; elytra dull, the disc depressed, widest a little behind the middle, somewhat abruptly narrowed just before the base, the apex slightly produced and rounded, humeri obtuse, the base raised in the middle, with rows of fine punctures, the interstices flat and each with a row of punctures almost as coarse as those of the striæ; anterior femora unarmed; anterior tarsi clothed with short stiff hairs beneath; spurs of the curved anterior tibiæ subequal; prosternum produced behind into a short horizontal projection.

Length 18½ millim. (♀.)

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

One example. This species is not very closely allied to any other here recorded.

2. *The basal joints of the anterior tarsi in the male densely clothed with finer (almost silky) hair beneath, rarely feebly dilated.* (Blapylis, Horn.)

A. *Anterior femora toothed in the male.*

a. *Elytra feebly caudate at the apex.*

30. **Elæodes spinolæ.**

Eleodes spinolæ, Sol. Studi Ent. p. 253[1].

Hab. Mexico[1], Toluca (*coll. F. Bates*), Yolos, Puebla, Oaxaca, Cuernavaca, Guanajuato (*Sallé*), Jalapa, Oaxaca (*Höge*), Monclova in Coahuila (*Dr. Palmer*).

31. **Elæodes calcarata.** (Tab. IV. fig. 15 ♂.)

Eleodes calcarata, Sturm, in litt.

Allied to *E. spinolæ*, and differing as follows:—Shining and more convex; the prothorax less transverse, narrower, a little more convex, smooth, and almost impunctate; the elytra more convex, with shallow or obsolete grooves, and scattered fine punctures, sometimes finely and shallowly punctate-striate; anterior femora toothed in the male.

Length 18–19 millim. (♂ ♀.)

Hab. Mexico, Guanajuato (*Sallé, ex coll. Sturm*).

Five examples.

32. **Elæodes montana.**

Allied to *E. spinolæ*, and differing as follows:—A little more shining, and more convex; the prothorax more convex, smooth, or finely and sparingly punctured; the elytra somewhat coarsely and shallowly punctate-striate, the interstices rather coarsely, and sometimes muricately, punctured, the apex feebly caudate and almost rounded; anterior femora toothed in the male.

Length 17–19 millim. (♂ ♀.)

Hab. Mexico, Alvarez Mountains (*Dr. Palmer*).

Six examples. This is perhaps a form of *E. spinolæ*.

b. *Elytra rounded at the apex.*

33. **Elæodes erratica.** (Tab. IV. fig. 16, ♂.)

Oblong ovate, convex, dull black. Head nearly smooth, or with fine scattered punctures; prothorax about as broad as long (male), a little shorter and more transverse (female), strongly convex, rounded at the sides, the base and apex of equal width, widest in the middle, in some examples very feebly sinuate near the obtuse anterior angles, hind angles obtuse or indistinct, with exceedingly fine scattered punctures; elytra narrow in the male, broader in the female, convex, the sides rounded to the base, widest about the middle, humeri obtuse, finely punctate-striate, the interstices each with a row of much finer punctures (often obsolete), in some examples the punctures of the striæ are indistinct and almost obsolete; anterior femora in the male with a short tooth, in the female bluntly toothed; antennæ in the male long and thin, in the female shorter and stouter, the last three joints in both sexes distinctly broader and larger than the preceding; basal joints of the anterior tarsi in the male thickly clothed with hair beneath; anterior tibial spurs subequal; legs in the male longer and thinner than in the female; prosternum with a more or less distinct blunt tooth behind.

Length 9½–14 millim. (♂ ♀.)

Hab. Mexico, San Blas, Mazatlan, Presidio, Tres Marias Islands (*Forrer*).

Twelve examples. A small, dull, convex, narrow species, not very closely allied to any other here recorded. A male and female were sent from the Tres Marias Islands; the former has longer and thinner antennæ and legs than examples of the same sex from the mainland; the female is, however, identical.

B. *Anterior femora unarmed in both sexes.*

* *Upper spur of the anterior tibiæ in the female longer and stouter than the lower spur.*

34. **Elæodes longicornis.** (Tab. IV. fig. 17, ♂.)

Oblong ovate, convex, smooth, dull black. Head sparingly and very finely punctured; prothorax about as broad as long, a little more transverse in the female, convex, moderately rounded at the sides, about equally narrowed at base and apex, widest in the middle, anterior angles obtuse and a little prominent, hind angles obtuse, smooth and almost impunctate; elytra scarcely wider than the thorax at the base in the male, wider in the female, slightly elongate in the male, shorter and broader and the apex broadly rounded and scarcely attenuate in the female, widest a little behind the middle, the sides moderately rounded and feebly sinuate a little before the base in both sexes, the humeri distinct and, in the female, almost meeting the hind angles of the thorax, smooth and almost impunctate; upper spur of anterior tibiæ in the female much longer and stouter than the lower spur; anterior femora unarmed in both sexes; basal joints of the anterior tarsi in the male thickly clothed with hair beneath; antennæ in the male rather long, the last three joints broad and stout, in the female shorter and stouter and the apical joints a little smaller than in the male.

Length 12–13 millim. (♂ ♀.)

Hab. Mexico, Ciudad in Durango 8100 feet, Milpas 5900 feet (*Forrer*).

Seven examples. A small, smooth, dull species, of a somewhat different facies from its allies.

** *Spurs of anterior tibiæ in the female subequal.*

35. **Elæodes hepburni.**

Elongate, convex, subfusiform, black, shining. Head almost smooth, with a few scattered exceedingly fine punctures; prothorax strongly convex, about as long as broad, widest in the middle, the base and apex about equal in width, the lateral margins scarcely visible from above, the sides rounded, somewhat abruptly constricted just before the base, and feebly sinuate near the obtuse anterior angles, anterior margin nearly straight, hind angles obtuse, with traces of an obsolete central channel, almost smooth, with exceedingly fine scattered punctures; elytra long, convex, the sides rounded gradually to the base, widest about the middle, the apex attenuate and broadly rounded, the humeri distinct and subacute, finely, indistinctly, and irregularly punctate-striate, with traces of shallow fine narrow grooves, the interstices flat and with some very fine widely scattered punctures; anterior femora unarmed; spurs of anterior tibiæ subequal; anterior tarsi from base to apex thickly clothed with hair beneath; all the tibiæ curved; prosternum horizontal, produced behind into a short blunt tooth.

Length 21 millim. (♂.)

Hab. Mexico, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

One example. Of the form of *E. longicollis*, but smaller, the anterior tarsi clothed throughout with hair beneath, the sides of the thorax more strongly embracing the flanks (the marginal carina scarcely visible from above), &c. The disc of the thorax in the single example before me is strongly impressed on each side a little behind the middle, and deeply impressed transversely just before the base; but this is probably due to accidental circumstances.

36. **Elæodes forreri.** (Tab. IV. fig. 18, ♂.)

Elongate, dull black, subopaque. Head with some scattered fine punctures (sometimes nearly obsolete), the vertex smoother; prothorax subquadrate, about as long as broad (very long in the male), longitudinally convex, narrowly margined, the angles obtuse and almost rounded (not acute or prominent), sides rounded and narrowing a little towards the base, with scattered very fine almost obsolete punctures; elytra in the male elongate and attenuate, and the apex broadly rounded, in the female shorter, widening from the base to beyond the middle, the sides rounded and the apex produced and rather broad, with rows of fine muricate punctures, the interstices flat and exceedingly finely wrinkled or smooth; the anterior femora unarmed in both sexes, slightly swollen in the middle, and emarginate near the apex in the male; the anterior tibiæ feebly emarginate on the inner side at the base, the spurs subequal; the basal joints of the anterior tarsi in the male thickly clothed with almost spongy hair beneath.

Length, ♂ 22 millim., ♀ 18–20 millim.

Hab. Mexico, Ciudad in Durango, 8100 feet (*Forrer*).

Six examples. Allied to *E. angusta* and *E. ruida* in form; the anterior tarsi thickly clothed with hair beneath, the upper surface dull and subopaque.

37. **Elæodes lævigata.** (Tab. IV. fig. 19, ♂.)

Eleodes lævigata, Sol. Studi Ent. p. 244.

Eleodes glaberrima, Chevr. in litt.

Hab. Mexico (*coll. F. Bates*), Oaxaca, Toluca, Orizaba (*Sallé*), Tehuacan, Oaxaca, Jalapa (*Höge*); Guatemala (*Sallé*), Totonicapam 8500 to 10,500 feet (*Champion*).

Under the name of *Eleodes lævigata*, Sol., there are, I think, two species confused in collections; Solier's description will perhaps apply better to *E. solieri*. This is the only *Elæodes* known, as yet, as occurring south of Mexico.

38. **Elæodes solieri.** (Tab. IV. fig. 20, ♂.)

Eleodes lævigata, Sol., var. A, Studi Ent. p. 244[1].
Eleodes glabrata, Sturm, in litt.
Eleodes cylindrica, Spin. in litt. (♂).
Eleodes oblonga, Sturm, in litt.
? *Blaps celsa*, Say, Bost. Journ. Nat. Hist. i. pp. 151–203[2]; Lec. Complete Writings of Thomas Say, ii. p. 657.

Smaller and a little more shining (the thorax especially) than *E. lævigata*; the thorax strongly transverse, more rounded at the sides, more strongly narrowed behind, and narrower at the base than at the apex; the elytra in the female less parallel, more narrowed towards the base.
Length 13–17 millim. (♂ ♀.)

Hab. Mexico[1 2] (*coll. F. Bates*), Oaxaca, Parada, Capulalpam, Puebla, Guanajuato, Orizaba, Durasnal (*Sallé*), Tehuacan, Las Vigas, Jalapa, Oaxaca (*Höge*), Alvarez Mountains, Saltillo in Coahuila, San Luis Potosi (*Dr. Palmer*), Pinos Altos in Chihuahua (*Buchan-Hepburn*).

This is the species generally known as *E. lævigata* in collections; it is apparently common and widely distributed in Mexico.

39. **Elæodes tenebricosa.**

Eleodes obscura, Sol. Studi Ent. p. 245 (nom. præoc.)[1].
Eleodes tenebricosa, Harold, Col. Hefte, vi. p. 122.
Eleodes reflexa, Deyr. in litt.
Eleodes chevrolati, Dej. in litt.

Hab. Mexico[1], Toluca, Oaxaca (*coll. F. Bates*), Oaxaca, Parada, Capulalpam (*Sallé*).

Duller and more convex than *E. lævigata* and *E. solieri*. The thorax more convex and more constricted towards the base than in *E. lævigata*; in some examples more transverse than in others.

40. **Elæodes distincta.**

Eleodes distincta, Sol. Studi Ent. p. 239[1].
Eleodes subrugosa, Sturm, in litt.

Hab. Mexico[1], Puebla (*Sallé, coll. F. Bates*), San Andres, Oaxaca (*Sallé*), Jalapa, Oaxaca (*Höge*).

41. **Elæodes sallæi.** (Tab. IV. fig. 21, ♂.)

Eleodes sallæi, Deyr. in litt.
Eleodes picea, Deyr. in litt.

Oblong ovate, black, shining. Head with some scattered fine punctures, the vertex smooth; prothorax transverse, subcordate, distinctly margined, moderately convex, strongly rounded at the sides, constricted towards the base, feebly emarginate in front, anterior angles rounded or obtuse, hind angles obtuse and indistinct, smooth or with very fine scattered punctures; elytra gradually widening and rounded from the base to the widest part about the middle, somewhat convex, the humeri rounded and not prominent, the sculpture varying very much, smooth with scattered very fine punctures and without any trace of striæ, shallowly punctate-striate and the interstices with scattered punctures, or coarsely, shallowly, and irregularly punctate-striate, the interstices coarsely punctured, and the punctures often confluent; anterior femora unarmed in both sexes; spurs of anterior tibiæ subequal; the basal joints of the anterior tarsi in the male thickly clothed with hair beneath.

Length 13–20 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), San Andres, Guanajuato (*Sallé*), Tehuacan (*Höge*).

Var. *a.* Elytra shallowly sulcate, the striæ with shallow not very coarse punctures, the interstices finely and sparingly punctured.

Hab. Mexico, San Andres (*Sallé*), Tehuacan, Jalapa (*Höge*).

Var. *b.* Smaller, the thorax a little less constricted behind, the sculpture of the elytra varying as in the type.

Length 15–16 millim.

Hab. Mexico, Las Vigas, Jalapa (*Höge*).

A species varying very much not only in size, but in the shape of the thorax and elytra; the thorax is a little more convex, more strongly rounded at the sides, and more constricted at the base, the anterior angles a little more rounded and less prominent, and the anterior margin straighter than in the specimens I refer to *E. distincta*, Sol.; the elytra vary exceedingly in sculpture, in some specimens almost rugulose, the interstices almost as coarsely punctured as the striæ, and the punctures frequently confluent, in other examples almost smooth and with the striæ almost obsolete; the interstices, however, are never transversely or obliquely wrinkled as in *E. distincta*, nor the humeri so distinct as in that species.

The var. *b*, though differing somewhat from *E. sallæi* in the shape of the thorax, is probably merely a form of that species.

42. **Elæodes impolita.** (Tab. IV. fig. 22, ♂.)

? *Blaps impolita*, Say, Bost. Journ. Nat. Hist. i. pp. 151–203 (1835)[1]; Lec. Complete Writings of Thomas Say, ii. p. 656.

Eleodes aubei, Sol. Studi Ent. p. 245[2].

Eleodes sublævis, Sturm, in litt.

Hab. Mexico[1 2] (*coll. F. Bates*), Puebla, Toluca, San Andres, Oaxaca (*Sallé*), Tehuacan, Oaxaca (*Höge*).

A dull subopaque species closely allied to *E. sallæi*. The thoracic hind angles acute; the elytra a little more narrowed towards the base, and the greatest breadth behind the middle, and in this respect approaching *E. lævigata* and *E. tenebricosa*.

43. Elæodes coarctata.

Eleodes coarctata, Sturm, in litt.

Elongate oval, somewhat parallel, convex, black, shining. Head with some fine scattered punctures; prothorax transverse, convex, strongly rounded at the sides, slightly narrowed towards the base, widest about the middle, feebly emarginate in front, anterior angles rounded and not prominent, hind angles obtuse, smooth or almost imperceptibly punctate; elytra narrowing but little towards the base, feebly rounded at the sides, humeri not prominent, smooth, or with almost imperceptible fine scattered punctures, and usually of a dark reddish-brown hue; anterior femora unarmed in both sexes; anterior tibial spurs subequal; basal joints of the anterior tarsi in the male thickly clothed with hair beneath.

Length 17–19 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Toluca, Puebla (*Sallé*).

Ten examples. Allied to *E. sallæi*, but smoother and more parallel; the thorax less constricted at the base; the elytra less rounded at the sides and broader at the base.

44. Elæodes högei. (Tab. IV. fig. 23, ♂.)

Ovate convex, dull black. Head with some fine widely scattered punctures; prothorax in the male about as broad as long, in the female transverse, convex, strongly rounded at the sides, the base and apex about equal in width, the angles obtuse, widest in the middle, smooth or almost imperceptibly punctured; elytra in the male rather elongate and a little wider than the thorax, in the female broad and short and much wider than the thorax at the base, in both sexes widest a little behind the middle, the sides rounded to the base, humeri obtuse, shallowly and finely punctate-striate, the interstices flat and sometimes with indistinct scattered punctures; anterior femora in both sexes very feebly emarginate near the apex; basal joints of the anterior tarsi in the male stouter than in the female and densely clothed with hair beneath; spurs of the anterior tibiæ subequal.

Length 12–13½ millim. (♂ ♀.)

Hab. Mexico, Tehuacan, Esperanza (*Höge*), Orizaba (*Sallé*).

Sent in plenty by Höge from Esperanza.

45. Elæodes gravida.

Xysta gravida, Eschsch. Zool. Atlas, ii. p. 9[1]; Guér. Mag. Zool. 1830, p. 30, t. 116. ff. 1–6[2]; Dej. Cat. 3rd ed. p. 210.

Hab. Mexico [1 2] (*coll. F. Bates*), Oaxaca (*Höge*).

Females of this species resemble somewhat *E. alutacea* (♀); the anterior tarsi are, however, densely clothed with hair beneath, and the anterior tibial spurs subequal, the upper spur but little longer than the lower spur. The specimen figured by Guérin is probably a female.

46. Elæodes angulata.

Xysta angulata, Eschsch. Zool. Atlas, iii. p. 9[1].

Hab. Mexico [1].

Apparently allied to and perhaps a form of *E. gravida*. The following is the description:—"Thorace planiusculo, transverso, lateribus ante medium rotundato, basi angustato et rectangulo; elytris obsolete sulcatis; sulcis tenuissime rugulosis. Long. 7 lin."

47. **Elæodes sulcata.** (Tab. IV. fig. 24, ♂.)

? *Xysta sulcata,* Eschsch. Zool. Atlas, iii. p. 9.

Oblong ovate, moderately convex, depressed above, dull black. Head with a few widely scattered fine punctures; prothorax transverse, rather depressed above, distinctly margined, subcordiform, strongly rounded at the sides, abruptly narrowed and sinuate before the base, the hind angles subrectangular, deeply emarginate in front, the base nearly straight, the anterior angles obtuse but prominent, very feebly and sparingly punctured; elytra broader than the thorax at the base, depressed, the sides gradually rounded to the base, widest about the middle, the humeri slightly swollen and almost meeting the hind angles of the thorax, shallowly sulcate, the interstices flat, the entire surface transversely, finely, and irregularly wrinkled and punctured; anterior femora unarmed; anterior tarsi densely clothed with hair beneath; anterior tibial spurs subequal.

Length 14 millim. (♂.)

Hab. Mexico (*coll. F. Bates*).

One example. *E. sulcata* may be known from small examples of *E. distincta,* &c., by the thorax being strongly constricted towards the base and subcordiform; in this respect it resembles the North-American *E. planata, E. consobrina,* &c., but in the latter the thorax is more convex and much more coarsely punctured. The following is the description of *X. sulcata,* Eschsch.:—"Thorace cordato; elytris punctulatis, sulcatis. Long. 7 lin." The present species may or may not be identical with it; if it should prove distinct, it might be called *E. batesi.*

48. **Elæodes melanaria.**

Eleodes melanaria, Eschsch. Zool. Atlas, ii. p. 13 [1]; Sol. Studi Ent. p. 241 [2].
Eleodes sulcipennis, Sturm, in litt.

Hab. Mexico [1 2] (*Sallé, ex coll. Sturm, coll. F. Bates*).

A single specimen of an *Elæodes* in the Sallé collection, labelled *E. sulcipennis,* Sturm, and another in that of Mr. F. Bates, are perhaps referable to this species.

49. **Elæodes stolida.**

Eleodes consobrina, Chev. in litt.

Oblong ovate, convex, dull black. Head with a few fine scattered punctures, the epistoma defined posteriorly by an impressed transverse line; prothorax strongly transverse, moderately convex, rounded at the sides, widest a little behind the middle, the sides feebly sinuate before the base, anterior margin nearly straight, all the angles obtuse, smooth and almost impunctate; elytra a little wider than the thorax at the base, the sides equally and gradually rounded to the base, widest about the middle, humeri obtuse, indistinctly or obsoletely punctate-striate, the interstices flat and sometimes with a few scattered punctures; anterior femora unarmed; anterior tarsi densely clothed with hair beneath; spurs of the anterior tibiæ subequal.

Length 12 millim.

Hab. Mexico (*Sallé*).

Three examples. A small dull species of somewhat obovate form; the thorax comparatively small and transverse. Labelled *E. consobrina,* Chevr., in the Sallé collection, a name used by Leconte for another species.

3. *The basal joints of the anterior tarsi in the male dilated and thickly clothed with spongy hair beneath.* (PROMUS, Horn.)

50. **Elæodes goryi.** (Tab. IV. fig. 25, ♂.)

Eleodes goryi, Sol. Studi Ent. p. 251, t. x. ff. 14, 15[1].
Eleodes seriata, Lec. Proc. Acad. Phil. 1858, p. 185[2]; Horn, Rev. Ten. N. A. p. 319.

Hab. NORTH AMERICA, New Mexico, Texas[2].—MEXICO[1 2] (*ex coll. Sturm*), Mirador (*Sallé*), Rinconado (*Höge*).

Sent in some numbers by Höge. Mexican specimens are identical with those from Texas.

The two following species are of doubtful position:—

51. **Elæodes striata.**

Xysta striata, Guér. Mag. Zool., Mélasomes, 1834, p. 30[1]; Cast. Hist. Nat. ii. p. 202[2].

Hab. MEXICO[2], Tempico[1].

52. **Elæodes brevicollis.**

Eleodes obsoleta, Sol. Studi Ent. p. 238 (nom. præoc.)[1].
Nycterinus brevicollis, Dup. in litt.

Hab. MEXICO[1].

I cannot identify this species amongst the vast number of Mexican *Elæodes* before me.

Group SCAURIDES.

This group, numerous in species in the Mediterranean region, will include *Argoporis* and *Ammophorus*. Two other genera (*Eulabis* and *Cerenopus*) are found in California (chiefly on the peninsula); these have not yet been received from Mexico.

ARGOPORIS.

Argoporis, Horn, Rev. Ten. N. A. p. 325 (1870); Lec. & Horn. Class. Col. N. A. p. 375 (1883).

This genus is peculiar to Mexico and the South-western United States; seven species (two of which are also found north of our frontier) are now known from Mexico.

These insects are found beneath stones, &c., in dry places.

1. **Argoporis bicolor.** (Tab. V. fig. 1, ♂.)

Cerenopus bicolor, Lec. Ann. Lyc. New York, v. p. 143 [1].
Argoporis bicolor, Horn, Rev. Ten. N. A. p. 325 [2].

Hab. North America, Vallecitas [1], Arizona [2], Colorado desert [2].—Mexico, Sonora [2] (*Morrison*).

2. **Argoporis rufipes.** (Tab. V. fig. 2, ♂.)

Dull black, the front of the head reddish brown. Head finely and closely punctured; prothorax about a broad as long, moderately convex, feebly rounded at the sides, narrowing a little towards the base, the disc shallowly impressed before the base, closely and very finely punctured; elytra comparatively rather short, but little narrowed towards the base, coarsely punctate-striate, the interstices slightly raised and costate just before the apex, flat or very feebly convex for the rest of their length, very finely and closely punctured; legs and antennæ red or reddish brown. In the male the intermediate and posterior tibiæ are finely, the anterior tibiæ rather coarsely and closely, denticulate within; the anterior femora swollen, and with a short blunt tooth near the base; the posterior femora much swollen and with three or four stout teeth, the inner of which is the longest.

Length 10½–13 millim. (♂ ♀.)

Hab. Mexico, Hacienda de San Miguelito, San Luis Potosi, Parras, and San Pedro in Coahuila, Valle del Maiz (*Dr. Palmer*).

Sent in plenty by Dr. Palmer. Allied to *A. bicolor* and differing as follows:—smaller, duller, and comparatively shorter in form; the thorax closely and distinctly punctured; the posterior femora of the male less abruptly swollen, the teeth differently arranged (in the same sex of *A. bicolor* the swollen posterior femur is produced within into a large triangular tooth; this tooth is bifid and furnished on each side with smaller teeth); the intermediate femora in the male unarmed.

3. **Argoporis brevicollis.**

Dark reddish brown, dull, subopaque. Head very closely and rather coarsely punctured, almost rugulose, the epistoma scarcely smoother and sharply defined posteriorly; prothorax broad, a little broader than long, convex in front, strongly rounded at the sides, narrowed towards the base, widest about the middle; hind angles obtuse and almost rounded, the disc slightly flattened towards the base, almost smooth; elytra rounded at the sides, strongly narrowed towards the base, the humeri prominent and subdentiform, coarsely punctate-striate, the interstices slightly raised and costate just before the apex, flat and almost impunctate for the rest of their length; antennæ and legs red.

Length 11½ millim. (♀.)

Hab. Mexico, Ventanas (*Forrer*).

Two examples. This species may be known by the close and coarse punctuation of the head, the short thorax, and the strongly rounded sides of the thorax and elytra; the male has yet to be discovered.

4. **Argoporis crassicornis.** (Tab. V. fig. 3, ♂.)

Reddish brown or black, convex, shining. Head very coarsely and rugulosely punctured between the eyes, the epistoma smoother and sharply defined posteriorly; prothorax convex, about as long as broad, broad in front, narrowed towards the base, the disc flattened or impressed before the base, smooth, almost impunc-

tate; elytra rounded at the sides, rather short, a little narrowed towards the base, the humeri thickened and prominent, rather coarsely punctate-striate, the interstices flat and almost impunctate, the sutural distinctly, and the third feebly, raised and costate just before the apex; legs and antennæ reddish brown or black; antennæ long and stout, widening outwardly, the last four joints strongly transverse. In the male the anterior tibiæ are rather coarsely, and the intermediate and posterior tibiæ finely, denticulate within; the anterior femora with a short stout blunt tooth near the middle, the posterior femora strongly swollen in the middle and with about four short stout teeth.

Length 9½–12½ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Ventanas 2000 feet, Presidio, San Blas (*Forrer*).

Allied to *A. cavifrons*, which it resembles in the coarsely punctured intraocular region of the head, but readily separated therefrom by the characters given above. A female from Presidio and another of the same sex in Mr. F. Bates's collection differ from the others in being smaller, the thorax narrower, and the legs and antennæ not quite so stout.

5. **Argoporis atripes.** (Tab. V. fig. 4, ♂.)

Argoporis atripes, Horn, Rev. Ten. N. A. p. 325 (desc. nulla) (♀)[1].

Black, shining, moderately convex. Head closely and finely punctured, the epistoma smoother; prothorax about as long as broad, moderately convex, the sides feebly rounded, slightly narrowed towards the base, widest about (or a little before) the middle, the disc flattened or impressed before the base, smooth, or almost imperceptibly punctured; elytra elongate, slightly flattened on the disc, feebly rounded at the sides, a little narrowed at the base, the humeri prominent, rather coarsely punctate-striate, the interstices slightly raised and costate just before the apex, flat for the rest of their length, almost imperceptibly punctured, and sometimes feebly wrinkled transversely along the suture; legs and antennæ black. In the male the tibiæ feebly denticulate within; anterior femora much swollen, and with a feeble broad blunt tooth on the inner side near the base; posterior femora slightly swollen in the middle, and with about four short teeth (somewhat distantly placed one from the other), the inner one the stoutest.

Length 12–13 millim. (♂ ♀.)

Hab. Mexico[1] (*coll. F. Bates*), Hacienda de Bleados, San Luis Potosi (*Dr. Palmer*). Guanajuato (*Sallé*).

Many specimens.

6. **Argoporis cavifrons.** (Tab. V. fig. 5, ♂.)

Dull black, convex, scarcely shining. Head coarsely and closely punctured between the eyes, the epistoma smoother and sharply defined posteriorly; prothorax convex, rather narrow, about as long as broad, the sides rounded and equally narrowed at the base and apex, widest in the middle, smooth or exceedingly finely and closely punctured; elytra of an elliptic form, convex, the sides rounded and strongly narrowed towards the base, widest in the middle, the humeri fine and dentiform, finely punctate-striate, the interstices almost smooth, the sutural obliquely, the third feebly, and the seventh distinctly raised and costate just before the apex, flat for the rest of their length; legs and antennæ black. In the male the tibiæ are very feebly denticulate within; posterior femora slightly swollen in the middle, with three or four short teeth; anterior femora with a short blunt tooth near the base.

Length 11–12 millim. (♂.)

Hab. Mexico, Presidio, Ventanas (*Forrer*).

Three male examples. Allied to *A. atripes*, and the posterior femora in the male

formed as in that species, but duller and more convex; the thorax narrower, more rounded at the sides, and not widened anteriorly; the elytra more narrowed towards the base and more finely punctate-striate; the head coarsely punctured between the eyes.

7. **Argoporis costipennis.**

Cerenopus costipennis, Lec. Ann. Lyc. New York, v. p. 143 [1].
Argoporis sulcipennis, Horn, Rev. Ten. N. A. p. 325 [2].

Hab. North America, Oregon, California, and Arizona [2], river Gila [1].

Found on our northern boundary.

AMMOPHORUS.

Ammophorus, Guérin-Ménéville, Voyage Coquille, Ent. ii. p. 94 (1830); Lacord. Gen. Col. v. pp. 132, 725.
Selenomma, Solier in Dej. Cat. 2nd edit. p. 183.

This is a genus containing some few species found in Peru, Chili, and the Galapagos Islands; one species is recorded from Panama, and another from the Sandwich Islands. It is probable, however, that there is some mistake about these last-named localities.

1. **Ammophorus denticollis.**

Ammophorus denticollis, Bohem. Res. Eugén. Ins. p. 89 [1].

Hab. ? Panama [1].

Group **EUTELIDES.**

This group will contain *Diceroderes,* a genus peculiar to Mexico and Guatemala; some not very closely allied forms are found in South Africa.

DICERODERES.

Diceroderes, Solier, Ann. Soc. Ent. Fr. x. p. 46 (1841); Lacord. Gen. Col. v. p. 356.
Prosomenes, Dej. Cat. 3rd edit. p. 216.

A single species only is known of this genus; *D. elongatus,* Redt., from Java belongs to the group Boletophagides.

1. **Diceroderes mexicanus.**

Diceroderes mexicanus, Sol. loc. cit. p. 49, t. 2. f. 16–21; Lac. loc. cit. p. 357.

Hab. Mexico (*coll. F. Bates*), Orizaba (*Sallé*), Jalapa (*Höge*); Guatemala, San Gerónimo (*Champion*).

This remarkable species may be known at once by the rough upper surface, and the thorax produced into a stout curved horn on each side in front; it is found under loose bark.

Group TENEBRIONIDES.

This group will include the "Cœlometopides" and the "Group I." of the "Ténébrionides vrais" of Lacordaire; the Group I. (Upes) and part of "Group II." (Tenebrionides) of the Tribe "Tenebrionini" of Leconte and Horn (Class. Col. N. A. 1883, p. 376).

Comparatively few of the species, or even of the genera, of the numerous tropical species of this group have been worked out as yet, though many of these are represented in collections, and are sometimes to be seen labelled as species of *Nyctobates*, *Iphthimus*, or *Upis*, genera with which they have little to do. Several genera not yet detected in our country are found in North America, two of which, *Upis* and *Iphthimus*, also occur in Europe.

Though unwilling to make the numerous additional genera described here, it seems to me far preferable to do so than to place these species under genera which, if we included them, it would be almost impossible to characterize. Most of the species, with the exception, perhaps, of those of the first two or three genera, are found beneath bark.

MITYS.

Form of *Polypleurus*. Mentum (Tab. V. fig. 7 *a*) trilobed, small, narrow, scarcely transverse, inflexed on each side, longitudinally convex in the middle; inner lobe of the maxillæ with a short curved tooth at apex (Tab. V. fig. 7 *b*); last joint of the maxillary palpi subsecuriform; antennæ (as in *P. nitidus*, Lec.) long and thin, last joints not transverse; epistoma broad, slightly rounded and not emarginate in front; sides of the front swollen and slightly divergent; the front flattened between the eyes; prothorax as in *P. nitidus*; scutellum small, transversely triangular; elytra rather short, inflated or slightly swollen, convex, smooth, or with fine punctured striæ; epipleuræ wide and narrowing gradually from the base, obsolete behind, and not reaching the apex; legs as in *P. nitidus*:—the tibiæ curved inwardly, and clothed with short matted hair (more distinctly in the male) on the inner side at their rounded apices (the spurs almost obsolete), the tarsi long and densely clothed with hair beneath; prosternum narrow, deflexed behind, the apex produced and rounded or bluntly toothed behind, longitudinally grooved on each side, the margins and centre raised; posterior coxæ widely separate; intercoxal process very broad, the apex feebly rounded and almost truncate. Apterous.

This genus will include three species from Mexico. The shape of the mentum, head, and the elytral epipleuræ forbid association with the North-American genus *Polypleurus*, though the species here described have much the general facies of *P. nitidus*, Lec., an insect found in Florida. *P. nitidus* itself differs greatly from the type of the genus (*P. geminatus*, Sol.) in the structure of the antennæ, tibiæ, and tarsi, and can scarcely be considered congeneric with it.

Mitys is also allied to *Chileone*, *Hypaulax*, and *Hipalmus*, F. Bates; and may be known from those genera by the characters given above.

1. **Mitys inflatus.** (Tab. V. fig. 7; 7 *a*, mentum and labial palpi; 7 *b*, maxilla and maxillary palpus.)

Ovate, convex, black, slightly shining. Head finely and rather closely punctured; prothorax about as long as

broad—in the female transversely convex, strongly rounded at the sides, slightly narrowed and sinuate just before the base, narrower at the base than at the apex, widest about the middle, anterior angles rounded, hind angles prominent but obtuse; in the male less convex, the sides straighter and less distinctly sinuate before the base, the base very distinctly margined and sometimes with a shallow transverse fovea on each side near the angles, rather closely, finely, and shallowly punctured, sometimes with traces of an obsolete central line or groove; elytra a little wider than the thorax at the base, rather short and inflated, moderately rounded at the sides, widest behind the middle, transversely convex, humeri obtuse, finely and shallowly punctate-striate, the punctures rather distant one from the other, the interstices flat, with fine oblique or transverse irregular scratches.

Length 14–16 millim. (♂ ♀.)

Hab. Mexico, Parada, Yolos (*Sallé*), Oaxaca, Cerro de Plumas (*Höge*).

Seven examples.

2. **Mitys lævis.** (Tab. V. fig. 6.)

Oblong ovate, black, shining. Head smooth or almost imperceptibly punctate; prothorax as long as or longer than broad, slightly rounded at the sides, widest a little behind the middle, a little narrower at the apex than at the base, moderately convex, the base very distinctly margined, exceedingly finely and sparingly punctured; elytra slightly wider than the thorax at the base, feebly rounded at the sides in the male, rounded and more narrowed towards the base in the female, the disc slightly depressed, smooth, or rarely finely and indistinctly punctate-striate.

Length 13–16 millim. (♂ ♀.)

Hab. Mexico, Tehuacan, Las Vigas, Esperanza (*Höge*).

Sent in numbers by Herr Höge. Comparatively longer, smoother, narrower, and less convex than *M. inflatus*; the thorax not sinuate at the sides before the base; the elytra comparatively longer, less inflated, and nearly smooth.

3. **Mitys opacus.**

Ovate, dark reddish brown, subopaque. Head almost smooth; prothorax as in *M. lævis*; elytra short, convex, feebly rounded at the sides, a little wider than the thorax at the base, almost smooth, with traces of obsolete striæ, the interstices flat.

Length 13 millim.

Hab. Mexico, San Antonio de Arriba (*Sallé*).

One example. Smaller, and narrower, and of a different form to *M. inflatus*; the thorax and elytra longitudinally and not transversely convex; comparatively shorter (the elytra especially) than *M. lævis*. *M. opacus* may be known from both the preceding species by its dull opaque surface; it is possibly a form of *M. lævis*.

ŒNOPION.

Form of *Mitys*. Mentum (Tab. V. fig. 8*a*) strongly transverse, the sides inflexed anteriorly, the anterior angles a little produced, broadly but feebly emarginate in front, the sides rounded posteriorly, a short oblique elevation on each side in the middle, coarsely rugulose; last joint of the maxillary palpi subtriangular; inner lobe of the maxillæ furnished with coarse spiny hairs (Tab. V. fig. 8*b*); antennæ short, sixth, seventh, and eighth joints the broadest, ninth and tenth transverse, last joint a little narrower; labrum transverse, large, prominent, feebly emarginate, anterior margin densely clothed with hair; epistoma broad, scarcely

emarginate, distinctly separated from the front; the sides of the front slightly divergent; prothorax broad, transversely convex; scutellum large, triangular; elytra about twice the length of the thorax, not contiguous to the thorax, transversely convex, strongly rounded at the sides, the apex a little produced and rounded, humeri obsolete, finely punctate-striate; all the femora rather coarsely punctured and slightly swollen at their apices; tibiæ and tarsi as in *Mitys*, the tibiæ rather coarsely punctured; epipleuræ narrow, indistinct, confounded with and not distinctly separated by a carina from the elytra, obsolete before the apex; prosternum rather broad, horizontal, the apex produced and rounded, rugulose, with a shallow groove on each side, between which convex; posterior coxæ and intercoxal process as in *Mitys*. Apterous.

One species from Mexico. *Œnopion* may be known from its allies by the structure of the mentum and epipleuræ: it is nearest allied to *Mitys*, *Hipalmus* (*Lobetus*, Motsch.), and *Cœlocnemis*.

1. **Œnopion gibbosus.** (Tab. V. fig. 8; 8 *a*, mentum and labial palpi; 8 *b*, maxilla and maxillary palpus.)

Oblong ovate, very convex, black, slightly shining. Head finely and sparingly punctured, the space between the eyes flattened and shallowly impressed on each side; prothorax transverse, widest anteriorly, narrowed from before the middle to the base, strongly and transversely convex, swollen anteriorly, anterior angles rounded, hind angles obtuse, lateral margins scarcely visible from above, basal margin distinct, feebly bisinuate and scarcely emarginate in front, base feebly bisinuate, with an indistinct central channel obsolete before the middle, the disc slightly impressed on each side behind the middle, finely but not very closely punctured; elytra a little wider than the thorax at the base, strongly rounded at the sides, transversely convex, widest a little beyond the middle, with rows of fine distant punctures, the interstices flat and with very fine transverse scratches or wrinkles.

Length 21 millim.

Hab. Mexico, Cerro de Plumas (*Höge*).

One example.

CENTRONOPUS.

Centronopus, Solier, Studi Ent. p. 258, t. 11. f. 4–8 (1848); Lacord. Gen. Col. v. p. 360 (nec Horn).
Centronipus, Dej. in litt.
Scotobænus, Lec. Proc. Acad. Phil. 1859, p. 88; Horn, Rev. Ten. N. A. p. 340.

This genus was founded by Solier upon a single species (*C. suppressus*, Say) from Mexico; we have now to add another species from that country. Closely allied forms are found in North America. Dr. Horn (Trans. Am. Ent. Soc. v. p. 15, 1875) has proposed the name of *Scotobates* for two North-American species (*C. calcaratus*, Fabr., and *C. opacus*, Lec.) formerly referred to *Centronopus*; Mr. C. O. Waterhouse, however, has pointed out (Ann. Nat. Hist. 4th ser. xvii. p. 288) that the *C. calcaratus*, Fabr., belongs to the genus *Menechides*, Motsch. (Bull. Moscou, 1872, p. 23). In the male of *Centronopus* the epistoma is rounded in front, the anterior margin reflexed and slightly raised in the centre; in the same sex of *Scotobænus* the epistoma is, as in the female of both, truncate, and the anterior margin not reflexed; these differences, however, are scarcely of generic importance.

1. **Centronopus suppressus.** (Tab. V. fig. 9, ♂.)

Tenebrio suppressus, Say, Boston Journ. Nat. Hist. i. p. 187 (1835)[1]; Lec. Complete Writings of Thomas Say, ii. p. 659.

Centronopus extensicollis, Sol. Studi Ent. p. 260, t. 11. f. 4–8 (1848); Chevr. Dej. Cat. p. 226.

Hab. Mexico[1] (*coll. F. Bates*), San Antonio de Arriba, Orizaba (*Sallé*), Las Vigas, Cordova (*Höge*).

Captured in great abundance by Herr Höge. The specimen figured by Solier is probably a female; we now figure the male.

2. **Centronopus grandicollis.**

Centronopus grandicollis, Sturm, in litt.

Elongate oval, depressed, black, slightly shining. Head finely and very closely punctured,—in the male the anterior margin rounded and reflexed, in the female the epistoma is truncate in front and the anterior margin scarcely reflexed; prothorax broad, transverse, the basal and lateral margins prominent and reflexed, the sides rounded, slightly narrowed and sinuate before the base, the hind angles very prominent (owing to the broad emargination of the base) and subacute, the disc broadly but feebly impressed before the base, finely, closely, and shallowly punctured; elytra long, depressed, feebly rounded at the sides, widest about, or a little behind, the middle, the sides abruptly narrowed just before the base, finely punctate-striate, the interstices flat and with exceedingly fine scattered shallow punctures or smooth, the striæ sometimes obsolete.

Length 14½–16 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates, Sallé, ex coll. Sturm*), Jalapa (*Höge*), Hacienda de San Miguelito (*Dr. Palmer*).

Found in some numbers by Dr. Palmer. Smoother and duller than *C. suppressus*, the elytra very finely or obsoletely punctate-striate.

PYRES.

Near *Centronopus*, Sol. Mentum (as in that genus) trilobed, small, feebly transverse, longitudinally convex and raised in the middle in front; antennæ short, joints 7–11 wide and in the form of a club, sixth and seventh joints triangular and wider than the preceding, eighth to tenth broad and transverse, eleventh large and broad and rounded at the apex; head much as in *Centronopus* but narrower, the sides of the front less divergent, and the eyes not so widely separate, the anterior margin in the male rounded and reflexed, in the female the epistoma truncate and the margin slightly swollen; prothorax strongly transverse, the lateral margins reflexed and prominent, closely embracing the elytra, hind angles subacute and prominent; scutellum large, scutiform; elytra wider than the prothorax, subparallel, punctate-striate; epipleuræ narrowing gradually from the base, obsolete before the apex; legs much as in *Centronopus*:—in the male the anterior tibiæ have on the inner side a triangular tooth near the middle, between which and the apex emarginate, the apex only (not the whole of the emargination as in *Centronopus*) clothed with hair, the intermediate tibiæ strongly curved inwardly and swollen at their apices, the posterior tibiæ slightly swollen a little before the middle, the outer edge of all the tibiæ rounded, the basal half of the posterior femora beneath not densely clothed with short hair (as in *Centronopus*), almost glabrous; in the female the tibiæ are simple and almost glabrous beneath; prosternum declivous behind, longitudinally grooved on each side, the centre convex; intercoxal process narrower than in *Centronopus*, pointed and not rounded in front; upper surface highly polished and of bright metallic colours.

The above description has been drawn up to receive an insect discovered by the late Mr. Belt in Nicaragua, and an allied species from Colombia *, which we think are best separated from *Centronopus*; apart from the bright metallic upper surface, shorter form, strongly transverse thorax, and different facies, the antennæ are more distinctly clubbed, the tibiæ on their inner side (except at their apices) almost glabrous, the scutellum narrower and less transverse (though large and prominent), the elytra comparatively shorter and distinctly broader than the thorax.

1. **Pyres metallicus.** (Tab. V. fig. 10, ♂.)

Centronopus metallicus, F. Bates, in litt.

Broad ovate, subparallel, convex, bright metallic purple or cupreous, often with an æneous or violet tinge, highly polished and shining. Head finely, closely, and shallowly punctured; prothorax strongly transverse, the sides rounded, feebly sinuate before the base, anterior angles prominent, though not acute, hind angles produced and subacute, base bisinuate and shallowly margined within (the margin not reflexed), lateral margins prominent and reflexed, the disc with a broad and deep transverse impression before the base, smooth or with fine scattered very shallow punctures; elytra broader than the thorax, subparallel, rather short, punctate-striate, the punctures rather distantly placed, and deeper and coarser (often confluent) at the sides than towards the suture or at the apex, the interstices flat and (like the thorax) with very fine scattered shallow punctures; legs and beneath dark bluish-violet.

Length 11–12½ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt*, *Janson*).

Many examples.

RHINANDRUS.

Rhinandrus, Leconte, New Sp. Col. p. 119 (1866); Horn, Rev. Ten. N. A. p. 342; Leconte & Horn, Class. Col. N. A. p. 377.

Exerestus, F. Bates, Ent. Mo. Mag. vi. p. 268; ibid. ix. p. 98; Kraatz, Deutsch. ent. Zeit. 1880, p. 132.

Proderops, Fairm. Ann. Soc. Ent. Fr. 1873, p. 393.

This genus has been described no less than three times by different authors. *Rhinandrus* is closely allied to *Zophobas*, the epistoma deeply emarginate in the male as in that genus, but may be known from it by the longer and more prominent head (the space *before* the eyes longer and more produced); the eyes distant from the thorax, smaller, narrower, and more transverse (the intraocular space broader); the inner lobe of the maxillæ without a claw; the base of the elytra straighter. In three of the four species here recorded the base of the elytra is distinctly raised and

* **Pyres batesi.**

Allied to *P. metallicus*, and differing as follows:—upper surface deep bluish-green; prothorax comparatively a little less transverse, anterior margin straighter; elytra with regular rows of deep longish impressions, scarcely finer towards the suture, but finer and shallower towards the apex, the interstices slightly raised and convex.

Length 11 millim. (♀.)

Hab. COLOMBIA, Bogota. A single example in Mr. F. Bates's collection.

the humeri prominent; in the remaining species (which might perhaps be placed equally well in *Zophobas*) the base of the elytra is, as in *Zophobas*, without a raised margin, and the humeri rounded and almost obsolete. Five species are now known from Lower California and Central America; two others have been described by Kraatz from South America *.

1. Rhinandrus elongatus.

Rhinandrus elongatus, Horn, Proc. Acad. Phil. 1866, p. 400 [1].

Exerestus jansoni, F. Bates, Ent. Mo. Mag. vi. p. 269, t. 2. f. 1, 1 *a* [2].

Proderops foraminosus, Fairm. Ann. Soc. Ent. Fr. 1873, p. 394 †; Kraatz, Deutsch. ent. Zeit. 1880, pp. 132, 133.

Hab. MEXICO (*coll. F. Bates*), Yucatan [1]; NICARAGUA [1], Chontales [2] (*Janson*, *Belt*).

The type described by Dr. Horn is before me; it agrees perfectly with the *Exerestus jansoni*, F. Bates.

2. Rhinandrus foveolatus. (Tab. V. fig. 11, ♂.)

Proderops foveolatus, Kraatz, Deutsch. ent. Zeit. 1880, p. 133 [1].

Hab. MEXICO [1] (*Sommer*), Tehuantepec (*Sallé*).

3. Rhinandrus helopioides. (Tab. V. fig. 12, ♂.)

Exerestus helopioides, Kraatz, Deutsch. ent. Zeit. 1880, p. 135 [1].

Hab. MEXICO, Oaxaca [1] (*Sallé*, *Baulny*).

4. Rhinandrus obsoletus. (Tab. V. fig. 15, ♂.)

Elongate, depressed above, dull black, subopaque, winged. Head small in the female, larger and longer in the male, shallowly, very finely, and sparingly punctured, the epistoma in the male broadly and rather deeply emarginate; prothorax broader than long, narrowed anteriorly, moderately convex, narrowly margined, widest about the middle, the sides rounded and distinctly sinuate before the base, the hind angles distinct and subacute, the anterior angles deflexed and obtuse, the disc slightly raised transversely immediately before the base, the elevation defined anteriorly by a shallow transverse impression and limited on each side by an oblique fovea, exceedingly finely and shallowly punctured; elytra wider than the thorax at the base and more than three times as long, widest beyond the middle, the humeri rounded and almost obsolete, finely or obsoletely punctate-striate, scutellar stria obsolete, interstices flat, almost smooth; posterior femora in the male broadly flattened and expanded, the upper face towards the base rugulose and concave within.

Length 20–24 millim. (♂ ♀.)

Hab. MEXICO, Presidio and Ventanas (*Forrer*).

Var.? A little more convex and less depressed, the epistoma in the male more deeply emarginate, the elytra with an indistinct fine scutellar stria.

Hab. MEXICO, Alamos (*Buchan-Hepburn*).

* Dr. Horn has quite recently (Trans. Am. Ent. Soc. xii. p. 160, April 1885) described yet another species from Arizona, *R. sublævis*; this is apparently very closely allied to *R. obsoletus*, but is described as having distinct humeri to the elytra.

† The locality given by Fairmaire is "Amérique méridionale," but Kraatz in Ent. Zeit. (*loc. cit.*) gives "Süd-Amerika" for the same insect.

This species may be known by its depressed and comparatively smooth upper surface and almost obsolete humeri; the elytra are much more finely punctate-striate than in the allied species; the female has much the general facies of *Alobates pennsylvanica*, De Geer. A single male only of the var.?, several of the type.

ZOPHOBAS.

Zophobas, Blanchard, Hist. des Ins. ii. p. 15 (1845); Lacord. Gen. Col. v. p. 376; Kraatz, Deutsch. ent. Zeit. xxiv. p. 121 (1880).

Numerous species of *Zophobas* are known from Tropical America, the genus ranging from Mexico to Brazil and Peru; several species are found in the West-Indian Islands, and one has been described from the island of Puna; one or two species from Ceylon have been ascribed by Walker to the genus, but probably in error. Dr. Kraatz (*loc. cit.*) enumerates twenty-one species; others, undescribed as yet and not included in this list, are known in collections. Ten, of which three appear to be undescribed, are now known from Central America. The different species are exceedingly variable and difficult, the females especially, to separate satisfactorily into species; the males, however, offer better differential characters in the extent of the emargination of the epistoma.

These insects are mostly of large size, and some of the species are spotted or marked with red; in the male the epistoma is more or less deeply emarginate, the posterior femora in the same sex often swollen and flattened, and the head larger and broader than in the female.

Many of the species are found in houses, and are nocturnal in their habits, and frequently attracted by light.

1. Zophobas tridentatus.

Zophobas tridentatus, Dej. Cat. 1837, p. 226; Kraatz, Deutsch. ent. Zeit. 1880, p. 124.

Hab. Panama, David (*Champion*).—Colombia; Guiana; Brazil.

2. Zophobas pedestris. (Tab. V. fig. 16, ♂.)

Form of *Z. tridentatus*; the epistoma in the male very broad in front, very distinctly tridentate (deeply emarginate on each side, the middle produced as far as the sides); the legs and antennæ longer; the femora stouter and not so smooth; the tibiæ much longer, the anterior pair more distinctly curved, larger and longer.

Length 30 millim. (♂.)

Hab. Nicaragua, Chontales (*Belt*).

A single male from Nicaragua, differing as above, and probably distinct from *Z. tridentatus*. The antennæ are drawn too short and the femora too thin in our figure.

3. Zophobas klingelhöfferi.

Zophobas klingelhöfferi, Kraatz, Deutsch. ent. Zeit. 1880, p. 126[1].

Hab. Mexico[1] (*Klingenhöffer*), Cordova (*Sallé*).

A male and female in the Sallé collection; three females only were known to the describer. In the male of this species the epistoma is deeply and almost triangularly emarginate, and the sides of the head behind the eyes distinctly swollen; the thorax in these specimens, as well as the elytra, is slightly marked with red.

4. **Zophobas signatus.** (Tab. V. fig. 13, ♀.)

Oblong ovate, black, opaque. Head almost smooth, the space between the eyes and the vertex (in some specimens) finely punctured; epistoma truncate in the female; prothorax transverse, the sides strongly rounded, slightly narrowing anteriorly, widest about the middle, constricted and sinuate before the base, the hind angles acute and prominent, lateral margins reflexed and prominent, and irregularly and coarsely crenulate from the middle to the strongly bisinuate base, disc broadly impressed transversely before the base, smooth or indistinctly punctured, and broadly marked with red on each side; elytra punctate-striate, interstices almost smooth, with four large and broad red spots, one on each side, transverse a little before the middle, and another on each side towards the apex; legs short.

Length 17½–22½ millim. (♀.)

Hab. British Honduras, Belize (*Blancaneaux*); Nicaragua, Chontales (*Belt, Janson*).

Four female examples. Closely allied to *Z. klingelhöfferi*; the thorax more strongly rounded at the sides, more narrowed anteriorly, and more strongly constricted before the base; the thorax and the elytra more distinctly marked with red.

5. **Zophobas morio.**

Helops morio, Fabr. Gen. Ins. Mant. p. 241. n. 45; Spec. Ins. i. p. 325; Mant. Ins. i. p. 214; Ent. Syst. i. p. 120; Syst. Eleuth. i. p. 160.

Helops elongatus, Beauv. Ins. Afr. et Amér. p. 164, t. 31. f. 9; Chev. Ann. Soc. Ent. Fr. 1852, p. 638.

Helops nigritus, Oliv. Ent. iii. 57, p. 5, t. 2. f. 26 *a, b.*

Zophobas morio, Kraatz, Deutsch. ent. Zeit. 1880, p. 128.

Zophobas domesticus, Chevr. in litt.

Hab. Mexico (*coll. F. Bates*), Tuxtla, Oaxaca (*Sallé*); Guatemala, San Gerónimo, Coban, Zapote (*Champion*); Nicaragua, Chontales (*Belt, Janson*); Costa Rica (*Van Patten*).—Colombia; Venezuela; Brazil; West Indies.

Labelled *Z. domesticus,* Chevr., in the Sallé collection.

Numerous species very closely allied to this have been described by Kraatz; one or two of which, to judge from the descriptions, can scarcely be considered more than varieties of this variable, widely distributed, and common species *.

6. **Zophobas macretus.**

Zophobas macretus, Kraatz, Deutsch. ent. Zeit. 1880, p. 130[1].

Hab. Mexico[1] (*Baulny*); Guatemala, San Gerónimo, Las Mercedes (*Champion*); Costa Rica (*Sallé, Van Patten*).

* The greater part of the synonymy given is taken from Kraatz's revision of the genus (*loc. cit.*).

7. Zophobas rugipes.

Zophobas rugipes, Kirsch, Deutsch. ent. Zeit. 1866, p. 197 [1]; Kraatz, ibid. 1880, p. 130.
? *Zophobas emarginatus*, Dej. Cat. p. 226 (1837).

Hab. MEXICO, Vera Cruz, Campeachy in Yucatan (*Sallé*); NICARAGUA, Chontales (*Belt, Janson*); COSTA RICA, Irazu (*Rogers*); PANAMA (*coll. F. Bates*), Chiriqui (*Ribbé*), Bugaba (*Champion*).—COLOMBIA [1]; BRAZIL; ECUADOR; WEST INDIES, Porto Rico, Guadeloupe.

8. Zophobas alternans.

Zophobas alternans, Kraatz, Deutsch. ent. Zeit. 1880, p. 131 [1].

Hab. MEXICO [1] (*Deyrolle*).

Unknown to me.

9. Zophobas laticollis. (Tab. V. fig. 14, ♂.)

Zophobas laticollis, Kraatz, Deutsch. ent. Zeit. 1880, p. 131 [1].

Hab. MEXICO, Cordova (*Sallé*); NICARAGUA, Chontales (*Belt, Janson*); PANAMA (*coll. F. Bates*), Chiriqui (*Ribbé*), Bugaba, David (*Champion*).—GUIANA; BRAZIL [1] (*coll. F. Bates*); PERU.

The numerous individuals of both sexes from Central and South America referred by me to this species differ from the description given by Kraatz (*loc. cit.*) in being larger, the epistoma in the male very deeply emarginate (sometimes with a feeble tooth in the middle), the posterior femora in the same sex flattened and swollen, the outer half of the upperside of which is concave and finely rugulose within. These examples, however, vary considerably in size (19–30 millim.), and in the size of the head in the male: fully developed males have the head long, large, and strongly exserted; in other smaller examples of the same sex from the same locality the head is scarcely larger or more exserted than in the female, the epistoma less deeply emarginate, and the posterior femora smoother, though always concave within. I cannot but regard these as more than forms of one species.

Z. ambiguus, Kr., is perhaps allied to this, but the description of that species is too short to speak with certainty.

10. Zophobas kraatzi.

Form of *Z. laticollis*, less opaque. The head in the male not larger or more exserted than in the female, the epistoma broadly but not very deeply emarginate in the male, closely and rather finely punctured on each side before the eyes; prothorax less convex, the sides straighter (less narrowed towards the base); elytra sculptured as in that species; the posterior femora in the male much less swollen, smoother, and not concave within.

Length 21½–25 millim. (♂ ♀.)

Hab. GUATEMALA, Zapote, Pantaleon (*Champion*).

Two male and two female examples. This and the preceding species have much the form of a very large *Tenebrio*.

TAUROCERAS.

Tauroceras, Hope, Col. Man. iii. p. 130 (1840).
Bucerus, Dej. Cat. 3rd edit. p. 225.

A genus peculiar to the forest-region of Tropical America; some four or five species are known, one of which is found in our country.

1. **Tauroceras angulatum.** (Tab. V. fig. 17, ♂.)

Tenebrio angulatus, Perty, Del. Anim. p. 57, t. 12. f. 7 (♀) (1830).

Hab. British Honduras, Rio Hondo (*Blancaneaux*); Guatemala, Zapote, Champerico (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*).—South America, Brazil.

This fine species is found beneath the loose bark of decaying forest-trees.

NYCTOBATES.

Nyctobates, Guérin-Méneville, Mag. Zool. 1834, Mélasomes, p. 33, t. 118. f. 2, *a–d*; Lacord. Gen. Col. v. p. 371; C. O. Waterhouse, Ann. Nat. Hist. 4th ser. xvii. p. 287 (nec Horn and Leconte).
Mylaris, Pallas, Icon. Ins. i. p. 37, t. 110. f. 1 (desc. nulla).
Milaris, Motsch. Bull. de Moscou, xlv. pt. 2, pp. 23, 37.

This genus, as recognized here, will include only the *Tenebrio gigas*, Linn., and two or three allied species, all of which are peculiar to South and Central America; one of these, *N. maxima*, Germ. (*grandis*, Dej.), from Brazil, is sometimes labelled *N. mexicanus*, Guér., in collections; it will not include the North-American species at present referred to it, which belong to *Alobates*, Motsch. (*cf.* Motschoulsky and C. O. Waterhouse, *loc. cit.*).

These insects are found in the forests beneath the loose bark of decaying or fallen trees; they emit a caustic fœtid yellow liquid when handled. The species of *Nyctobates* are almost the largest known forms of Tenebrionidæ.

1. **Nyctobates gigas.**

Tenebrio gigas, Linn. Syst. Nat. edit. 12, i. pt. 2, Insecta, p. 674[1] (1767); Am. Acad. vi. p. 396. no. 26; Fabr. Syst. Eleuth. i. p. 144 (1801).
Mylaris gigantea, Pall. Icon. Ins. i. p. 37, t. C. f. 1 (1781).
Tenebrio laminatus, Fabr. Mant. i. p. 211 (1787).
Helops laminatus, Fabr. Ent. Syst. i. p. 117 (1792).
Upis gigas, Herbst, Nat. Käf. vii. p. 232, t. 110. f. 1 (1797).
Nyctobates gigas, Guér. Mag. Zool. 1834, Mélasomes, p. 33, t. 118. f. 2, *a–d*.
? Var. *Milaris cayennensis*, Motsch. Bull. de Moscou, xlv. pt. 2, p. 27 (1872).

Hab. Mexico (*coll. F. Bates*); Guatemala, Cubilguitz (*Champion*); Nicaragua, Chontales (*Janson*, *Belt*); Panama (*coll. F. Bates*, *ex Boucard*).—Colombia; Brazil; Peru; Guiana, Surinam, Cayenne[1]; Bolivia.

A common species in Tropical South America, becoming rarer north of the Isthmus of Panama. The males have the thorax larger and longer and more strongly rounded at the sides than the females. This and the following species vary a good deal in size, and also slightly in the structure of the mentum and the sculpture of the elytra.

Guiana specimens, and one or two others from Peru and Brazil, in Mr. F. Bates's collection, are rather smaller in size, the thorax a little more transverse, and the striæ more distinctly punctured (the punctures not very closely placed) than other individuals from Central America and Colombia; but in the long series of specimens before me intermediate forms are to be found, and I prefer to regard them as varieties or forms of one and the same species.

2. **Nyctobates procerus.** (Tab. V. fig. 19, ♂.)

Nyctobates procerus, Höpfner, in litt.

Closely allied to *N. gigas*, and differing as follows:—The upper surface more shining and less opaque; the prothorax proportionally longer and less transverse, and more narrowed anteriorly (especially in the female); the elytra more deeply sulcate, finely crenate-striate, the interstices more convex and shining, and more closely and distinctly (though very finely) punctured.

Length 28–43 millim. (♂ ♀.)

Hab. Mexico, Presidio (*Forrer*), Orizaba (*coll. F. Bates*), Cordova (*Sallé*, *Höge*), Jalapa (*Höge*); British Honduras, Rio Hondo, Rio Sarstoon, Belize (*Blancaneaux*); Guatemala, Yzabal (*Sallé*), Zapote, Pantaleon, El Tumbador, San Isidro, Cubilguitz (*Champion*).—Colombia, Carthagena (*coll. F. Bates*).

Sent in great numbers by Herr Höge from Jalapa. This species is common in Mexico and Guatemala, becoming rarer southwards; it has not yet been received from the State of Panama. Labelled as above in most collections. *N. procerus* may be separated from *N. gigas* by the characters given above; it also averages rather smaller in size, and the muricate or crenate punctures of the striæ (distinct in some examples and obsolete in others of *N. gigas*) are placed closer together.

NUPTIS.

? *Nuptis*, Motschoulsky, Bull. de Moscou, xlv. pt. 2, pp. 25, 32 (1872).

Mentum small, feebly trilobed, inflexed on each side anteriorly, longitudinally convex in the middle, the anterior angles slightly acute or rounded (*N. corticalis* and *N. tenebrosus*); inner lobe of the maxillæ (as in *Merinus*) with a simple claw; mandibles truncate at the apex; antennæ short, joints 6–11 broader, 8–10 transverse, or as broad as long; last joint of the maxillary palpi securiform; head broad, the sides of the front swollen and slightly divergent; epistoma truncate, similar in both sexes, or in some species excavate, and with the anterior margin slightly raised and reflexed, and with a short erect tubercle in the middle in the male; eyes large, transverse oval, intraocular space narrow; prothorax strongly transverse, slightly rounded at the sides, the anterior angles rounded, the posterior angles slightly acute and formed by the reflexed basal margin, the sides narrowly margined, the base bisinuate, and the margin raised and grooved within; scutellum large, triangular; elytra closely embracing and distinctly wider than the thorax, subparallel, the humeri rounded and swollen, with rows of (usually) coarse impressions placed upon indistinct or shallow striæ; prosternum horizontal, with the apex produced and sublanciform or rounded, or declivous behind and more or less embracing the coxæ, with the apex slightly produced and broadly rounded (the mesosternum in these species

raised obliquely on each side in front, and concave within, but the angles are not pointed as in *Derilis*); legs smooth, rather short; femora stout, incrassate, the anterior pair rarely toothed in the male (*N. caliginosus*); anterior tibiæ curved, in the male with a short triangular tooth on the inner side near the middle, rarely with two teeth (one in the middle, the other nearer to or at the apex); the extreme apices of the tibiæ and the basal joints of the tarsi more or less densely clothed with silky yellowish hair beneath; intermediate and posterior tibiæ in one or two species slightly swollen in the middle in the male; epipleuræ narrowing gradually from the base, terminating somewhat abruptly at the last ventral suture, and scarcely attaining the apex. Winged. Form elongate oval, subparallel, convex, slightly depressed above.

The above description has been drawn up to receive several Central-American species, one or two of which are also found south of the Isthmus of Panama. It will include the undescribed *Iphthimus cornutus*, Laferté, of collections; the *Nuptis tenuis*, Motsch., from Nicaragua, is probably congeneric with the species here described, though the author makes no mention of the structure of the anterior tibiæ, epipleuræ, &c. Most of the characters of this, and of *Œatus*, are taken from a carefully prepared but unpublished revision of the "*Ténébrionides vrais* of Lacordaire," made long ago by Mr. F. Bates. *Nuptis* might easily be divided, the form of the pro- and mesosternum differing in various species; but the structure of the maxillæ, mandibles, tibiæ, and epipleuræ being similar in all the species known to me, I prefer to place them in one genus. Somewhat similar variations in the form of the epistoma of the male in the different species may be seen in *Centronopus*. This genus is allied to *Taphrosoma*, Kirsch (*Orobychus*, Pascoe), from which, apart from the more transverse thorax and much smaller size, it differs in the shape of the mentum, epipleuræ, &c. A good many allied and mostly undescribed forms, probably generically distinct, are found in Tropical South America; one of which, the *Tenebrio variolosus*, Fabr., is known in collections.

These insects, like *Nyctobates*, are found under loose bark. Owing to the hard, tough integument of the elytra, and the loosely attached parts of the body, they are difficult to pin, and frequently come to pieces under that operation.

a. *Epistoma in the male margined in front, and with a short erect tubercle in the middle.*

1. Nuptis tenuis.

Nuptis tenuis, Motsch. Bull. de Moscou, xlv. pt. 2, pp. 25, 32[1].

Hab. NICARAGUA[1].

I am unable to identify this species amongst the large number of Central-American specimens of the group before me. Judging from the size given ($6\frac{1}{4}$ lines), *N. tenuis* is smaller and narrower than any of the species here recorded.

2. Nuptis cornutus.

Iphthimus cornutus, Laferté, in litt.

Black, shining. Head with some scattered shallow coarsish punctures, impressed between the eyes; epistoma in the male concave within, well defined posteriorly by a transverse impression, the anterior margin raised

and slightly reflexed, and with a short erect tubercle in the middle; prothorax strongly transverse, convex, the sides feebly margined, smooth, the disc usually with a distinct fovea on each side before the middle; elytra with rows of rather coarse rounded impressions, the impressions finer towards the suture, the interstices smooth; anterior tibiæ in the male curved, with a short triangular tooth on the inner side near the middle, and a short blunt tooth at apex; intermediate and posterior tibiæ in the male slightly swollen a little before the middle; prosternum smooth, horizontal, the apex strongly produced and rounded; mesosternum raised obliquely on each side anteriorly, deeply excavated within; ventral segments longitudinally wrinkled.
Length 15–19½ millim. (♂ ♀.)

Hab. Guatemala (*coll. Brit. Mus.*); Nicaragua, Chontales (*Janson*); Panama (*coll. F. Bates*).—Colombia; Brazil.

3. **Nuptis inquinatus.** (Tab. V. fig. 21, ♂.)

Black, shining. Head irregularly, shallowly, and somewhat coarsely punctured, flattened and impressed and rugulose between the eyes; epistoma in the male concave within, the anterior margin raised and slightly reflexed, and with a short erect tubercle in the middle; prothorax transverse, widest about the middle, the sides rounded and very narrowly margined, strongly convex, with an indistinct central line, the disc feebly impressed transversely before the base, shallowly, finely, and sparingly punctured; elytra indistinctly striate, with rows of moderately coarse (or coarse) longish or rounded impressions, the impressions finer towards the suture, interstices smooth and almost impunctate; anterior tibiæ curved, in the male with a short triangular tooth on the inner side near the middle; prosternum subhorizontal, slightly deflexed, the apex produced and broadly rounded; mesosternum slightly concave in the middle in front.
Length 17–20 millim. (♂ ♀.)

Hab. Guatemala, El Reposo, Pantaleon, Zapote, El Tumbador, San Juan in Vera Paz (*Champion*).

Rather common in Guatemala.

4. **Nuptis caliginosus.** (Tab. V. fig. 20, ♂.)

Black, shining. Head shallowly, irregularly, and rather finely punctured, flattened and excavated and rugulose between the eyes; epistoma in the male concave within, the anterior margin raised and slightly reflexed, and with a short erect tubercle in the middle; prothorax strongly convex, transverse, widest about the middle, the sides rounded and very narrowly margined (the lateral margins scarcely visible from above), the base strongly margined, smooth, and almost impunctate, the disc sometimes with a rounded impression on each side before the middle; elytra with rows of deep, coarse impressions, the impressions scarcely finer towards the suture, obsoletely striate, the interstices almost smooth; anterior femora in the male toothed beneath; anterior tibiæ in the male with two short teeth (one sharp and triangular near the middle, midway between which and the apex there is another and blunter tooth), in the female slightly swollen in the middle; posterior tibiæ in the male slightly swollen (or obsoletely toothed) a little before the middle; tarsi densely clothed with fine long fulvous hair beneath; prosternum deflexed behind, slightly produced, the apex broadly rounded and slightly embracing the coxæ.
Length 17–19 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Cordova (*Sallé*), Jalapa (*Höge*).

Seven examples. The male of this species may be known at once from its allies by the toothed anterior femora and the armature of the anterior tibiæ; the female by the anterior tibiæ slightly swollen (or bluntly toothed) in the middle. In some specimens, as in the allied species, the elytra are more finely punctured than in others.

b. *Epistoma not margined in the male, similar in both sexes.*

5. **Nuptis validus.** (Tab. V. fig. 22, ♂.)

Black, shining. Head feebly impressed or flattened between the eyes, shallowly, distantly, and rather finely punctured; epistoma broad, indistinctly defined posteriorly, similar in both sexes; prothorax transverse, convex, widest a little before the middle, the sides feebly rounded, very finely, shallowly, and diffusely punctured, sometimes almost smooth, with an indistinct central line; elytra with regular rows of deep coarse impressions, the impressions a little finer towards the suture; anterior tibiæ in the male with a sharp tooth on the inner side near the middle and a broad triangular tooth just before the apex; posterior tibiæ in the male slightly swollen (or bluntly toothed) a little before the middle; prosternum smooth, horizontal, the apex produced and rounded; mesosternum raised obliquely on each side in front, concave within.

Length 18–21 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, San Gerónimo (*Champion*).

Labelled *Nyctobates validus*, Chevr., in the Sallé collection.

6. **Nuptis tenebrosus.** (Tab. V. fig. 23, ♂.)

Black, shining. Head with some very coarse scattered punctures between the eyes, the epistoma not distinctly separate from the front, and similar in both sexes; prothorax widest a little before the middle, strongly transverse, moderately convex, the sides distinctly margined and slightly narrowed and sinuate towards the base, very finely, shallowly, and sparingly punctured, the disc in some specimens transversely impressed a little before the base; elytra indistinctly striate, with rows of coarse deep impressions, interstices smooth; anterior tibiæ in the male with a sharp triangular tooth on the inner side near the middle; prosternum horizontal, the apex produced and sublanciform; mesosternum raised obliquely on each side in front, strongly concave within.

Length 17–18½ millim. (♂ ♀.)

Hab. Mexico, Santecomapan (*Sallé*); Guatemala, Cubilguitz, Senahu, and San Juan in Vera Paz (*Champion*).

Allied to *N. validus*, but smaller, the head very coarsely punctured between the eyes, the posterior tibiæ not swollen in the middle in the male.

7. **Nuptis corticalis.**

Black, shining. Head and prothorax as in *N. tenebrosus*; elytra indistinctly striate, with rows of not very coarse or fine longish impressions, the impressions somewhat distantly placed and scarcely coarser towards the sides, interstices smooth; anterior tibiæ in the male with a sharp triangular tooth on the inner side near the middle; prosternum horizontal, the apex produced and rounded; mesosternum raised obliquely on each side in front, concave within.

Length 16–18 millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt, Janson*); Panama, Volcan de Chiriqui (*Champion*).

Allied to *N. tenebrosus*; the elytra more evidently striate, more finely and equally punctured, the punctures scarcely coarser towards the sides; the sides of the mesosternum less raised, &c.

Rather common in Chiriqui beneath the loose bark of old fallen trees in the forests.

ŒATUS.

Form of *Deriles* and *Nuptis*. Mentum trapeziform, rather flat, broadly but feebly emarginate in front, anterior angles acute; inner lobe of the maxillæ unarmed; antennæ as in *Nuptis*; head grooved behind the eyes, sides of the front slightly swollen and divergent; epistoma not margined anteriorly in the male, similar in both sexes, well defined posteriorly; eyes very large and prominent, rounded, not widely separated; labrum prominent; prothorax as in *Nuptis*, but more distinctly margined; scutellum large, transverse; elytra parallel, and broader than the thorax (as in *Nuptis*), crenate-striate, interstices convex; prosternum deflexed behind, margined within, the apex slightly produced and embracing the coxæ; mesosternum slightly concave in front; legs smooth, normal, the femora not incrassate as in *Nuptis*, unarmed in both sexes; anterior tibiæ unarmed in both sexes; the tibiæ [which are slightly curved and thickened at their apices] on the inner side from the middle to the apex, and the tarsi beneath, thickly clothed with fulvous hair; epipleuræ gradually narrowing from the base, and extending to the apex of the elytra, and becoming more or less vertical beyond the last ventral segment.

This genus will include the undescribed *Iphthimus chevrolati*, Höpfn., from Mexico, &c.; the *Tenebrio variolosus*, Fabr., from South America; and a nondescript species from Guiana will probably, though differing greatly in the structure of the pro- and mesosternum, have also to be included in it. Allied forms, *Amenophis*, Thoms., and *Deriles*, (Motsch.) C. O. Waterhouse, are found in the Old World.

1. **Œatus chevrolati.** (Tab. V. fig. 18.)

Iphthimus chevrolati, Höpfner, in litt.

Black, shining. Head very finely and sparingly punctured, almost smooth; prothorax with a distinctly raised and reflexed margin, the sides feebly rounded and slightly sinuate in the middle and just before the base, the hind angles prominent and subacute (rarely obtuse), the anterior angles rounded, base strongly bisinuate, very finely, shallowly, and diffusely punctured, the disc slightly raised in the middle in front elytra crenate-striate, interstices convex, smooth; ventral segments at the sides and the last ventral segment at the apex distinctly margined within.

Length 20–22 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Cordova (*Sallé*), Jalapa (*Höge*); British Honduras (*coll. F. Bates*), Rio Sarstoon, Belize (*Blancaneaux*); Guatemala, Purula, Santa Rosa, Cerro Zunil, El Tumbador, San Joaquin in Vera Paz (*Champion*); Costa Rica (*Van Patten*).

A common species in Mexico and Guatemala. In some examples, from Costa Rica, &c., the striæ are more closely and finely crenate, the thorax narrower, and the posterior angles more obtuse than in others; intermediate forms, however, occur.

HICETAON.

Allied to *Œatus*. The mentum similar, but slightly convex in the middle and rounded at the anterior angles; inner lobe of the maxillæ unarmed; mandibles truncate; antennæ as in *Œatus*; head long, broad in front, grooved behind the eyes; epistoma broad and short, sides of the front slightly divergent; eyes distant from the thorax, widely separate, transverse oval, moderately large and prominent; labrum prominent; prothorax a little broader than long, narrowly margined at the sides and base, rounded at the sides, narrowed at base and apex, the base feebly bisinuate; scutellum, elytra, prosternum, and epipleuræ as in *Œatus*; femora and tibiæ distinctly and rather closely punctured; anterior tibiæ unarmed in both sexes; tarsi beneath and the apical half of the tibiæ clothed with fulvous hair.

One species from Mexico and British Honduras. On account of the different shape of the head, the broader intraocular space (the eyes in consequence more distant), and the more narrowly margined thorax, *Hicetaon* is best separated from *Œatus*, which in other respects it greatly resembles. The shape of the front of the head more nearly approaches *Iphthimus*, a genus found in Europe and temperate North America; the shorter head, larger eyes, narrower intraocular region, differently shaped mentum, and the more parallel form will, however, at once separate it from that genus.

1. **Hicetaon frontalis.** (Tab. VI. fig. 8.)

Black, shining. Head very coarsely and ruguloscly punctured between the eyes, the epistoma and vertex smoother, the vertex longitudinally impressed; prothorax convex, the sides rounded, sinuate before the base, narrowed behind, the posterior angles subacute, the disc raised in the middle in front, finely, shallowly, and sparingly punctured; elytra crenate-striate, the interstices smooth and convex; ventral segments at the sides, and the last at the apex, margined within.

Length 17½–21 millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*); British Honduras, Rio Hondo and Rio Sarstoon (*Blancaneaux*).

Four examples.

STHENOBŒA.

Near *Œatus*. Mentum narrow, about as broad as long, strongly inflexed on each side, longitudinally convex in the middle, anterior angles rounded; mandibles truncate at the apex; apical joint of maxillary palpi securiform; inner lobe of the maxillæ unarmed; antennæ moderate, about reaching to the base of the thorax, third joint as long as the first and second united, fourth to seventh decreasing in length and widening outwardly, fourth and fifth oboval, sixth and seventh triangular, eighth to tenth broad and transverse, eleventh large and broad, much longer than the tenth, and bluntly rounded at the apex; head not very deeply sunk into the prothorax, moderately large; epistoma rather broad, truncated in front; sides of the front rounded, slightly swollen and divergent; eyes narrow, transverse, not very large, moderately prominent, intraocular space moderately broad; labrum not prominent; prothorax very strongly transverse, almost twice as broad as long, lateral margins narrow and distinctly reflexed, base strongly bisinuate and margined within, hind angles rectangular, anterior angles rounded or obtuse, closely embracing the elytra; scutellum large, scutiform, finely punctured; elytra a little wider than the thorax at the base (in our species), about four times as long as the thorax, moderately convex, punctate-striate (in our species) or with rows of coarse impressions, the scutellar stria deeply impressed, feebly rounded at the sides, widest beyond the middle, transversely and shallowly impressed on each side just before the base, humeri distinct (in our species); epipleuræ narrow, widening at the base, and ending at last ventral suture; prosternum horizontal, smooth, the apex strongly produced, convex, lanciform; mesosternum strongly raised and tuberculiform on each side anteriorly, deeply concave within; legs moderate; femora thin; tibiæ curved, the apices pubescent within and feebly grooved on their external edge, spurs almost obsolete, the intermediate and posterior pairs in the male with a sharp tooth on the inner side near the apex; tarsi moderately long and stout, basal joint as long as the two following joints united, the basal joints densely clothed with spongy fulvous hair beneath. Winged. Species black, or with angulated transverse red bands.

This genus will include one species from Mexico, the undescribed *Iphthimus brevicollis*, Laf., from Colombia, and *I. undulatus*, Chevr., from Guiana. *Sthenobœa* is not very closely allied to any of the new genera described here; it is perhaps nearest to the undescribed *Upis* (?) *exarata*, Dej., from Brazil. From *Œatus*, and other Central-

American genera, this genus may be known by the narrower and more transverse eyes, the broad and very short thorax, the less parallel elytra, the structure of the prosternum, and the feebly channelled tibiæ.

1. Sthenobœa apicalis. (Tab. VI. fig. 1, ♀.)

Oblong ovate, rather broad, black, shining. Head closely, finely, and equally punctured; prothorax very short, nearly twice as broad as long, the sides interrupted in the middle, narrowed anteriorly, anterior angles broadly rounded, hind angles rectangular, anterior margin almost straight, base strongly bisinuate, and with a short, very shallow, oblique impression on each side near the middle, between which the margin is deeply impressed within, with an indistinct central line, finely and not very closely punctured, the disc shining, the sides dull; elytra a little wider than the thorax at the base, humeri distinct, punctate-striate (the punctures long and approximate), the interstices smooth and rather convex towards the suture, the disc shining, the sides and apex duller, the striæ less distinctly impressed behind, and with a reddish spot on each side just before the apex.

Length 14 millim. (♀.)

Hab. Mexico (*coll. F. Bates*).

One example.

Allied to the undescribed *Iphthimus undulatus*, Chevr., from Guiana.

GLYPTOTUS.

Glyptotus, Leconte, Proc. Acad. Phil. ix. p. 75; Lacord. Gen. Col. v. p. 729; Horn, Rev. Ten. N. A. p. 341; Leconte & Horn, Class. Col. N. A. p. 377 (1883).

One species of this genus is known from Texas; we now add another from Mexico and Nicaragua.

1. Glyptotus nitidus. (Tab. V. fig. 24.)

Glyptotus nitidus, F. Bates, in litt.

Black, shining. Head smooth, impunctate; prothorax broader than long, widest at the base, narrowing gradually anteriorly, the sides distinctly margined and feebly sinuate just behind the middle, anterior angles rounded, posterior angles acute, base strongly bisinuate and the margin distinctly impressed within, shallowly, finely, and rather closely punctured; elytra regularly and rather finely punctate-striate, the punctures becoming coarser and more distant one from the other towards the sides, interstices flat, smooth, or very finely and indistinctly punctured, rarely with shallow transverse wrinkles; prosternum strongly declivous behind, the apex not produced.

Length 7–9 millim.

Hab. Mexico, Jalapa (*Höge*); Nicaragua (*coll. F. Bates*), Chontales (*Belt, Janson*).

Allied to the North-American *G. cribratus*, Lec., but more shining, the elytra much more finely punctate-striate, the thorax wider and more distinctly margined at the base.

ISICERDES.

Form of *Glyptotus nitidus*, Ch. Mentum trapeziform, inflexed on each side, winged, slightly raised in the middle anteriorly, anterior angles distinct; antennæ short, scarcely reaching to the base of the thorax, third joint short and scarcely as long as the united fourth and fifth, fourth and fifth oboval and subequal, sixth

much broader than fifth, seventh to tenth broad and transverse, eleventh large and broad; inner lobe of the maxillæ unarmed; apical joint of maxillary palpi securiform; head deflexed, short; epistoma short, in the female broadly truncated, in the male broadly but feebly emarginate in front; sides of the front feebly swollen; eyes distant, large, broad oval; labrum not prominent, scarcely visible from above; prothorax strongly transverse, distinctly margined at the sides, convex, hind angles prominent and slightly divergent, base strongly bisinuate and scarcely margined within, closely embracing the elytra; scutellum large, triangular; elytra wider than and nearly three times as long as the thorax, strongly convex, punctate-striate, or with rows of coarsish impressions placed upon indistinct striæ, and with a distinct scutellar stria, base shallowly impressed on each side near the rather distinct humeri; epipleuræ narrow, widening suddenly at the base, and ending about the last ventral suture; prosternum deflexed behind, horizontal or subhorizontal, and the apex slightly produced; mesosternum very feebly raised on each side anteriorly, rarely concave within; trochantin distinct; legs short; femora unarmed, intermediate and posterior pairs slightly swollen in the middle; tibiæ curved, short, distinctly channelled on their outer edge, spurs very small or obsolete; tarsi short, rather stout, basal joint about as long as the two following joints united; the basal joints not very thickly clothed with hair beneath. Winged. Species black and shining.

The above characters have been drawn up to receive a few species from Central America and Colombia. *Isicerdes* may be known from *Glyptotus* by the comparatively small head, very short transverse thorax, shorter legs, short basal joint to the hind tarsi, the tarsi less thickly clothed with hair beneath, and the tibiæ more or less distinctly channelled on their outer edge.

1. **Isicerdes occultus.** (Tab. VI. fig. 2.)

Oblong ovate, very convex, black, shining. Head sparingly and very finely punctured, the punctuation a little more distinct and closer between the eyes; prothorax strongly transverse, lateral margins prominent, slightly rounded at the sides, sinuate before the base, widest at the base and slightly narrowing anteriorly, anterior angles produced and rounded, hind angles slightly divergent and subacute, shallowly and broadly impressed just before the base, finely, distinctly, and not very closely punctured; elytra with regular rows of coarsish impressions placed upon shallow indistinct striæ, the impressions finer towards the suture, interstices smooth, in the male a little narrower and more parallel in form than in the female; prosternum subhorizontal, the apex slightly produced and broadly rounded, distinctly margined on each side within, subrugulose; mesosternum very feebly excavated within; ventral segments with scattered longitudinal wrinkles.

Length 8–10 millim. (♂ ♀.)

Hab. Mexico, Tuxtla (*Sallé*); British Honduras, Belize (*Blancaneaux*); Guatemala, Cerro Zunil, Capetillo (*Champion*), Yzabal (*Sallé*); Panama, Volcan de Chiriqui (*Champion*).

A common species in Chiriqui; and found by beating the still attached withered leaves of fallen forest-trees, and, more rarely, under loose bark.

2. **Isicerdes funebris.**

Elongate oval, subparallel, convex, black, shining. Head closely and rather coarsely punctured, the front and vertex smoother, the epistoma shallowly impressed on each side near the eyes; prothorax strongly transverse, the sides narrowly margined, very feebly crenulate anteriorly, feebly sinuate before the base, anterior angles broadly rounded, hind angles subrectangular, transversely, broadly, and shallowly impressed just before the base, distinctly and rather closely punctured; elytra long, subparallel, closely and not very coarsely punctate-striate, the interstices smooth and slightly convex towards the

sides; prosternum deflexed behind, the apex broad, slightly produced, and margined within; tibiæ feebly channelled on their outer edge, spurs almost obsolete.
Length 8 millim.

Hab. GUATEMALA, Zapote (*Champion*).

Two examples. Closely allied to a species from Colombia*, but longer, and the elytra more finely punctate-striate. Of a different facies from *I. occultus*; flatter, less convex, the thorax less distinctly margined at the sides; the elytra punctate-striate, the tibiæ less distinctly channelled, &c.

HESIODUS.

Allied to *Isicerdes*, and differing as follows:—Head shorter, rather more deflexed, more deeply sunk into the thorax; the epistoma shorter, broadly rounded in front; the sides of the front very slightly swollen, almost equally rounded with the epistoma, and scarcely divergent; labrum not visible from above; eyes more distant, more rounded and less transverse; antennæ as in *Isicerdes*; prothorax narrowly margined at the sides, the margins sometimes indistinctly crenulate, strongly transverse, the base bisinuate, closely embracing the elytra; scutellum moderate in size, triangular; elytra and epipleuræ as in *Isicerdes*; prosternum subhorizontal, the apex slightly produced and rounded; mesosternum simple; trochantin distinct; tibiæ not channelled on their outer edge, the spurs small, the posterior pair very slightly swollen about the middle in the male; femora unarmed; tarsi variable, long and thin, and the basal joint longer than the two following joints united, or (as in *Isicerdes*) shorter and stouter, and the basal joint the length of the two succeeding joints united. Winged. Species shining, slightly metallic or black.

This genus will include a few small and inconspicuous species from Central and South America, and probably the North-American *Haplandrus ater*, Lec., which, on account of the differences in the structure of the head, tibiæ (the spurs of the anterior pair obsolete, of the intermediate and posterior short but distinct), &c., we think best separated from *Isicerdes*; the tarsi are variable in structure, and, except in *H. longitarsis*, short as in *Isicerdes*. The species are of similar habits to *Isicerdes*, and found by beating the branches or the still attached leaves of fallen trees.

Some allied forms, perhaps not generically distinct, are found in Java.

1. **Hesiodus longitarsis.** (Tab. VI. fig. 7, ♂.)

Oblong ovate, very convex, bright brassy æneous, often with a purplish or greenish tinge, shining. Head finely, shallowly, and sparingly punctured; prothorax transverse, convex, scarcely wider behind than in front,

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* **Isicerdes attenuatus.**

Closely allied to *I. funebris*, and differing as follows:—The head less distinctly impressed on each side in front; the thorax slightly narrowed anteriorly, the lateral margins more distinctly crenulate, and more closely and distinctly punctured; the elytra comparatively shorter, more coarsely punctate-striate (the punctures longer and coarser and not so close together); prosternum horizontal, impressed on each side within, the apex produced into a short broad tubercle, rugulose; mesosternum raised on each side anteriorly, concave within.
Length 8 millim.

Hab. COLOMBIA (*coll. F. Bates*).

One example. Labelled "*G. attenuatum*, Chevr."

the sides slightly rounded, feebly sinuate before the base, anterior angles rounded, hind angles subacute, the base strongly bisinuate, usually feebly impressed transversely before the base, finely, shallowly, and sparingly punctured; elytra strongly convex, rather long, slightly wider than the thorax, with regular rows of fine distant impressions placed upon shallow indistinct striæ, interstices exceedingly finely and sparingly punctured; legs black, rarely reddish brown; intermediate and posterior tarsi long and thin, basal joint of the latter longer than the two following joints united.

Length $6\frac{1}{2}$–$7\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO, Cordova (*Sallé*), Jalapa (*Höge*); NICARAGUA, Chontales (*Belt*).

Not rare in Mexico; one example only from Nicaragua. An allied species is found in the Amazon region *.

2. Hesiodus sordidus.

Allied to *H. longitarsis*, and differing as follows:—Colour reddish brown, with a slight greenish tinge; prothorax more closely and distinctly punctured; elytra punctate-striate, the punctures fine and approximate, the interstices rather more distinctly punctured, scutellar stria distinct, the base straighter; tarsi shorter, the basal joint of the hinder pair about as long as the two following joints united.

Length 6 millim.

Hab. MEXICO, Cordova (*Sallé*).—BRAZIL, Ega (*coll. F. Bates*).

One example from each locality.

3. Hesiodus jansoni.

Oblong ovate, strongly convex, black, shining. Head finely and rather closely punctured; prothorax transverse, widest at the base, slightly narrowing anteriorly, the sides slightly rounded and very feebly sinuate before the base, feebly impressed transversely before the base, the base strongly bisinuate, distinctly, finely, and rather closely punctured; elytra a little wider than the thorax, finely and rather closely punctate-striate, the striæ feebly impressed, interstices very finely and rather closely punctured, humeri distinct; tarsi short, basal joint of the hinder pair the length of the two following joints united.

Length $6\frac{1}{2}$–$7\frac{1}{2}$ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Janson*).

Several examples. Of the form of *Isicerdes occultus*, but much smaller, the tibiæ not grooved on their outer edge, the elytra finely and shallowly punctate-striate.

4. Hesiodus conspurcatus.

Oblong ovate, convex, black, shining. Head closely and not very finely punctured, the epistoma smoother; prothorax transverse, widest at the base, scarcely narrowing anteriorly, the sides slightly rounded before the middle and almost straight behind, hind angles rectangular, lateral margins slightly crenulate, base

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* **Hesiodus brasiliensis.**

Allied to *H. longitarsis*; prothorax a little wider anteriorly, more distinctly, less finely, and more closely punctured; the elytra less finely punctate-striate, the punctures coarser and closer, the scutellar stria very distinct; tarsi much stouter and shorter, the basal joint of the hinder pair as long as the two following joints united.

Length 6 millim.

Hab. BRAZIL, Ega (*coll. F. Bates*). One example.

feebly bisinuate, very finely and diffusedly punctured; elytra long, strongly convex, with regular rows of coarse longish impressions, the impressions becoming coarser and deeper outwardly, without impressed striæ, the interstices smooth, humeri distinct; tarsi short.
Length 5½ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

One example. Resembles *Isicerdes occultus*, and the elytra sculptured as in that species, but very much smaller; the eyes more distant, the tibiæ not grooved on their outer edge.

5. **Hesiodus debilis.** (Tab. VI. fig. 6.)

Elongate oval, moderately convex, very dark reddish brown, shining. Head closely and rather coarsely punctured; prothorax strongly transverse, subquadrate, about as wide behind as in front, the sides slightly rounded before the middle, almost straight behind, hind angles rectangular, the base feebly bisinuate, closely and rather coarsely punctured; elytra scarcely wider than the thorax, subparallel, punctate-striate, the punctures fine and approximate, the interstices finely, sparingly, and distinctly punctured, scutellar stria distinct, humeri subdentiform and impressed within; antennæ short, third joint short and scarcely as long as the united first and second joints, seventh to tenth joints strongly transverse; tarsi short, stout, basal joint of the hinder pair the length of the two following joints united.
Length 5 millim.

Hab. Guatemala, Pantaleon (*Champion*).

One example. Of the form of *Isicerdes funebris*; the structure of the posterior tarsi and the elytral sculpture much as in that species, but very much smaller, the eyes more distant, the tibiæ not channelled on their outer edge, the spurs of the intermediate and posterior tibiæ short but distinct.

ILUS.

Form of *Haplandrus femoratus*, Fabr. Mentum trapeziform, trilobed, inflexed on each side, strongly raised and convex in the middle anteriorly, anterior angles distinct; last joint of the maxillary palpi securiform; antennæ short, scarcely reaching to the base of the thorax, widening outwardly, third joint rather long and as long as the united first and second, fourth and fifth subequal and oboval in form, sixth and seventh much wider and subtriangular, eighth to tenth broad and transverse and widening outwardly, eleventh twice as long as and still broader than the tenth, and bluntly rounded at the apex; head short, broad, sunk into the prothorax to the eyes; epistoma broadly truncated in front, short; sides of the front feebly divergent and but little swollen; eyes distant, large, broad oval; labrum almost hidden from above; prothorax very short, strongly transverse, very narrowly margined at the sides, strongly bisinuate at the base, hind angles divergent and acute, closely embracing the elytra; scutellum triangular; elytra wider and more than three times as long as the thorax, with regular rows of shallow rounded impressions and traces of obsolete striæ; epipleuræ narrow, widened suddenly at the base, and ending about the last ventral suture; prosternum subhorizontal, broad, the apex slightly produced and in the form of a short blunt tooth, deeply impressed within, the centre raised and longitudinally convex; mesosternum raised on each side, concave within; anterior and intermediate femora scarcely swollen; intermediate coxæ oblique, the trochantin very small and narrow, and scarcely visible; posterior femora widening on the inner side from the base to about the middle, then abruptly emarginate, thus forming a short broad triangular tooth; tibiæ curved, the extreme apices pubescent on their inner side, not grooved, the spurs of the anterior pair almost obsolete, of the hinder pairs short and distinct; tarsi rather long, basal joint of the posterior pair the length of the two following joints united, and almost as long as the last joint. Winged.

A single species, of small size, from Costa Rica. This genus may be separated from *Haplandrus* and *Isicerdes*, apart from other differences, by the oblique intermediate coxæ and the scarcely visible trochantin; in this latter respect more nearly approaching the group "Ulomides." The comparatively short thorax (the hind angles of which are acute and divergent), long elytra, the antennæ very distinctly widening outwardly (the apical joint very large), and the almost obovate form will enable *Ilus* to be readily recognized amongst its allies.

1. **Ilus apicicornis.** (Tab. VI. fig. 3.)

Obovate, moderately convex, rather depressed above, black, shining. Head finely and distinctly punctured, the epistoma separated from the front by an impressed transverse line, and with a shallow rounded impression on each side before the eyes; prothorax short, strongly transverse, as wide in front as behind, the sides rounded, narrowed and sinuate before the base, hind angles acute, outwardly directed, and prominent, anterior angles broadly rounded and slightly produced, feebly emarginate in front, base strongly bisinuate, shallowly, finely, and not very closely punctured; elytra very long, a little wider than the thorax, widening gradually from the base to the widest part some distance beyond the middle, beyond which broadly rounded to the slightly produced apex, the base shallowly depressed about the scutellum and on each side within the slightly prominent obtuse humeri, with regular rows of shallow coarsish impressions placed upon shallow obsolete striæ, the impressions becoming coarser outwardly and finer and closer towards the suture.

Length 9 millim.

Hab. Costa Rica, Cache (*Rogers*). One example.

CHOASPES.

Choaspes, F. Bates, in litt.

Mentum narrow, about as broad as long, strongly inflexed on each side, longitudinally convex and much raised in the middle, anterior angles rounded; antennæ short, stout, widening outwardly, third joint short, fourth about the length of the third, eighth to tenth broader than long, eleventh large and broad, and almost as long as the united ninth and tenth; inner lobe of the maxillæ with a few spiny hairs at the apex; apical joint of maxillary palpi securiform; head short, broad, the epistoma broadly rounded in front in the female, subtruncate in the male; sides of the front (antennary orbits) slightly divergent, rounded, and prominent; eyes distant, transverse, moderately large and prominent, coarsely granulated; labrum not prominent; prothorax transverse, flattened above, base strongly bisinuate, deeply emarginate in front, lateral margins reflexed and prominent, angles produced and prominent, closely embracing the elytra; scutellum large, triangular; elytra broader than the thorax, convex, comparatively short and broad, about two and a half times as long as the thorax, and with a short scutellar and eight regular rows of coarse longish impressions placed upon feebly impressed striæ, transversely impressed on each side before the base; humeri obtuse; epipleuræ broad, smooth, feebly concave, narrowed gradually from the base and ending abruptly just beyond the last ventral suture, and separated from the elytra by a very distinct keel; prosternum horizontal, the apex produced and sublanciform, longitudinally impressed on each side, the sides distinctly raised, the middle more or less longitudinally convex; mesosternum raised into a distinct tubercle on each side in front, deeply excavated within; legs short; the tibiæ distinctly channelled on their outer edge, slightly curved, short, the spurs obsolete or indistinct; anterior and intermediate femora slightly swollen in the middle, sinuate or emarginate before the apex; posterior femora in both sexes swollen and with a large triangular blunt tooth on the inner side near the middle, between which and the apex emarginate; tarsi rather stout, short, basal joint of the hinder pair as long as the two following joints united. Winged. Species submetallic in colour; form comparatively broad, convex.

This genus will include two species from Central America, and one or two others, undescribed as yet, from Brazil. *Choaspes* may be known from its allies by the strongly transverse and distinctly margined and angled thorax, the comparatively short and broad and distinctly margined elytra, the short legs, the tibiæ grooved on the outer edge (the spurs obsolete), the posterior femora armed in both sexes, the shining surface, and submetallic colour. The rows of impressions on the elytra extend only to the transverse basal depression, and do not reach the base.

1. **Choaspes purpureus.** (Tab. VI. fig. 4.)

Choaspes purpureus, F. Bates, in litt.

Oblong ovate, broad, subparallel, dull metallic purple, sometimes with an æneous tinge, rarely purplish-black, slightly shining. Head distinctly, rather finely, and sparingly punctured; prothorax strongly transverse, scarcely wider at base than at apex, not very convex, the sides very slightly rounded, sinuate before the base, anterior angles produced and rounded, hind angles subacute, the disc slightly raised in front, and with a longitudinal fovea in the middle and another smaller impression (often obsolete) at the base, the base with a short oblique fovea on each side near the middle and just within the margin, finely and sparingly punctured; elytra with regular rows of coarse or moderately coarse longish impressions placed upon indistinct striæ, interstices flat and very finely punctured.

Length 7–9 millim. (♂ ♀.)

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala, Cubilguitz, Panima, San Juan in Vera Paz (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*); Panama, Volcan de Chiriqui (*Champion*).

The specimens from the different localities differ somewhat in size, colour, and in the punctuation of the elytra; but they are, I think, all referable to one variable species. The antennæ in the female are a little shorter, and the penultimate joints more transverse than in the male.

The single individual from the State of Panama is blacker, and the impressions on the elytra are deeper and stronger than in the specimens from the other localities.

Found under loose bark or in the curled-up withered leaves of fallen forest-trees.

2. **Choaspes angulicollis.** (Tab. VI. fig. 5.)

Allied to *C. purpureus*, and differing as follows:—More shining, colour bright black with a bluish-green tint; the eyes more transverse, and the intraocular space narrower; the sides of the thorax straighter, the anterior angles longer and still more prominent, the longitudinal fovea on the disc deeper, on each side midway between this fovea and the margin is another oblique longish deep impression, the basal foveæ deeper; elytra slightly longer, rather less parallel, slightly narrowing from the middle to the base, and widest beyond the middle.

Length 9 millim.

Hab. Nicaragua, Chontales (*Belt*). Two examples.

TENEBRIO.

Tenebrio, Linnæus, Syst. Nat. ed. x. p. 417 (1758); Lacord. Gen. Col. v. p. 379; Horn, Rev. Ten. N. A. p. 345; Motsch. Bull. de Moscou, xlv. pt. 2, pp. 26, 27; Lec. & Horn, Class. Col. N. A. p. 378 (1883).

Neatus, Leconte, Class. Col. N. A. p. 233 (1862).

This genus, as at present recognized, includes only the well-known cosmopolitan *T. molitor* and *T. obscurus* (both of which are now introduced almost all over the world through the medium of commerce) and their allies.

1. Tenebrio molitor.

Tenebrio molitor, Linn. Faun. Suec. p. 224 (1761); Sturm, Fn. ii. p. 219, t. 46. f. *n–p*; Muls. Col. de France, Latig. p. 277; Horn, loc. cit. p. 345.

Hab. Costa Rica (*Van Patten*).—Europe; North America, &c.

Probably introduced from Europe.

The following genera are of uncertain position. Till the numerous undescribed species of tropical Tenebrionidæ are more fully worked out, it is better not to make new groups for these isolated aberrant forms, which, like *Apolites*, *Catapiestus*, and others, have at present few, if any, known allies.

RHACIUS.

Form of *Calcar* (*Centorus*, Muls.). Mentum variable, moderately large, subcordiform, flattened, and the anterior angles rounded (*R. sulcatulus*), or small, transverse, widest behind, and the angles rounded (*R. quadricollis*); ligula prominent, deeply emarginate in front; mandibles variable, pointed at the apex (*R. sulcatulus*), or slightly fissile (*R. quadricollis*); inner lobe of the maxillæ unarmed; antennæ short, stout, slightly widening outwardly, scarcely or about reaching the base of the thorax, third joint scarcely as long as the first and second united, fourth to sixth obconic and decreasing in length, seventh to tenth broader than long, eleventh large; head (as in *Centorus*) sunk into the thorax to the eyes, short, broad, narrowing from the eyes forwards; epistoma more or less confounded with the front, truncate or feebly emarginate; sides of the front not divergent, feebly swollen; eyes broad, moderately large; prothorax long, quadrate, scarcely narrowing behind, very distinctly margined at the sides, closely embracing the elytra; scutellum strongly transverse; elytra long, narrow, scarcely wider than the thorax, widest at or near the base, narrowing gradually posteriorly, regularly and closely punctate-sulcate or punctate-striate, scutellar stria distinctly impressed, interstices flat or convex, very distinctly margined at the sides, humeri distinct; epipleuræ narrow, narrowing gradually from the base and extending to the apex; prosternum flattened, produced, and truncate or rounded at the apex, not raised; middle coxal cavities open; trochantin distinct; third and fourth ventral segments without distinct coriaceous hind margin; legs short; intermediate and posterior femora (apparently in both sexes) swollen in the middle, and with a strong triangular tooth, between which and the apex emarginate; tibial spurs distinct; tarsi thinly clothed with spiny hairs beneath, last joint of the posterior pair about as long as the preceding joints united. Winged. Surface slightly pubescent or glabrous.

The following characters, partly taken from unpublished MS. of Mr. F. Bates, have

been drawn up to receive two undescribed species, the *Tenebrio sulcatulus*, Dej., and the *Calcar quadricollis*, Laferté, from Central and South America. *Rhacius* may be at once known from the Old World genus *Calcar* by the very distinctly margined thorax and elytra, the thorax scarcely narrowed at the base, the shorter antennæ, toothed femora, &c.; the head is formed much as in a species of *Calcar* (*C. procerus*, Muls.), separated by Mulsant from that genus under the name of *Centorus*. The absence (as in *Calcar*) of the distinct coriaceous hind margin to the third and fourth ventral segments makes the genus difficult to locate satisfactorily; the general form of one of the species is similar to the North-American *Tenebrio castaneus*, Knoch (separated, and in the writer's opinion rightly, as generically distinct from *Tenebrio* in Mr. F. Bates's collection). Allied more distantly to *Bius*, Muls.; in both these genera, however, the hind margins of the third and fourth ventral segments are distinctly coriaceous. In all the specimens before me, consisting apparently of both sexes, the four hinder femora are strongly toothed.

Both species have been beaten from herbage.

1. **Rhacius sulcatulus.** (Tab. VI. fig. 9.)

Tenebrio sulcatulus, Dej. Cat. p. 226.

? *Tenebrio opatroides*, Perty, in litt.

Elongate, parallel, moderately convex, dark reddish brown or black, dull, slightly pubescent. Head closely and rugulosely punctured, the epistoma separated from the front by a deep transverse impression; prothorax scarcely broader than long, subquadrate, feebly rounded at the sides, widest about the middle, almost equally narrowed at the base and apex, broadly but not deeply emarginate in front, base feebly bisinuate and almost straight, hind angles rectangular, very closely, finely, and rugulosely punctured, with a smooth central line, and the disc shallowly impressed before the base; elytra about twice as long as and but little wider than the prothorax, sides subparallel and narrowing very gradually from the base, the apex broadly rounded, base nearly straight, humeri distinct, punctate-sulcate, the punctures muricate, transverse, and closely placed, interstices narrow, convex, almost smooth (finely and very sparingly punctured) and shining. The entire surface beneath closely and finely punctured; legs reddish brown; prosternum truncate at apex.

Length 8–10 millim.

Hab. Mexico, Vera Cruz, Playa Vicente (*Sallé*), Oaxaca (*Höge*), Yucatan (*coll. F. Bates*); Guatemala, El Reposo, San Gerónimo (*Champion*); Nicaragua, Chontales (*Janson*).—South America, Carthagena; West Indies, Cuba.

Many examples.

2. **Rhacius quadricollis.** (Tab. VI. fig. 10.)

Calcar quadricollis, Laferté, in litt.

Elongate, parallel, feebly convex, flattened above, black, shining, glabrous. Head closely, finely, and equally punctured, the epistoma confounded with the front; prothorax quadrate, as long as broad, sides almost straight, widest in front, and narrowing very slightly towards the base, slightly convex anteriorly, hind angles rectangular, very closely, finely, and equally punctured, the base with a short, shallow, oblique impression on each side about the middle; elytra twice as long as and but little wider than the prothorax at the base, sides almost straight, closely punctate-striate, the interstices flat and sparingly and finely

punctured. Beneath reddish brown, shining, very sparingly and finely, the sides more closely, punctured; prosternum slightly rounded at the apex, margined within; legs and antennæ red or reddish brown.
Length 7½ millim.

Hab. British Honduras, Rio Hondo, Belize (*Blancaneaux*); Guatemala, Cubilguitz (*Champion*).—Colombia (*coll. F. Bates, ex Laferté coll.*).

Several examples. Smaller, narrower, and more shining than *R. sulcatulus*; the sides of the thorax straight, the elytra differently sculptured, and the tarsi shorter.

EUPSOPHUS.

Eupsophus, Horn, Rev. Ten. N. A. p. 347 (1870); Lec. & Horn, Class. Col. N. A. p. 378 (1883).

A single species of this genus has been recorded from California; we now add another from Mexico.

Eupsophus is placed by Dr. Horn (*loc. cit.*) at the end of the group "Tenebrionides," with the remark that it should probably constitute a separate tribe and be placed near the "Goniaderides" of South America.

In general form this genus resembles certain species of *Himatismus* or *Epitragus*.

1. Eupsophus horni.

Eupsophus horni, F. Bates, in litt.

Allied to *E. castaneus*, and differing as follows:—Dull dark castaneous; the head very closely and rugulosely, the epistoma a little less closely but rather more coarsely, punctured; prothorax finely, closely, and confluently punctured; elytra irregularly and closely punctured, but not so closely as the head and prothorax, the punctures separate, the interspaces feebly or indistinctly wrinkled, and with traces of obsolete shallow longitudinal grooves. Beneath slightly shining, finely and rather closely punctured.
Length 10½ millim.

Hab. Mexico (*coll. F. Bates*).

Two examples. *E. horni* may be readily separated from *E. castaneus*, judging from the description, by the very close and uniform punctuation of the dull upper surface.

Group PEDINIDES.

This group will include a few genera, all but one of which are found in North America. With the exception of *Hopatrinus*, the eyes are, in our genera, completely divided. One genus (*Blapstinus*) is represented by many species, the remainder by one or two species only. *Mecysmus*, a genus found at Fort Yuma in California, and near our northern boundary, has not yet been received from our country.

Other allied genera, *Diastolinus* and *Cenophorus* *, are found in the Antilles.

* Single examples of *Diastolinus puncticollis*, Muls., and *D. costipennis*, Muls., and of *Cenophorus viduus*, Muls., labelled "Mex.," are contained in Mr. F. Bates's collection; it is possible there is some mistake about this locality, as these species were all described from the island of Santo Domingo. *Diastolinus* is, however, known from the north-east coast of South America; the genus may occur also on the Atlantic side of Central America.

HOPATRINUS.

Opatrinus, Latreille, Règne Anim. 2nd edit. v. p. 19 (1829); G. R. Waterhouse, Ann. Nat. Hist. xvi. p. 34 (1845); Muls. & Rey, Mém. Acad. Lyon, ii. pp. 295–298 (1852); Lacord. Gen. Col. v. p. 240; Leconte, Class. Col. N. A. p. 226; Horn, Rev. Ten. N. A. p. 348; Leconte & Horn, Class. Col. N. A. p. 378.
Anchophthalmus, Gerst. Monats. Berlin Acad. 1854, p. 533.
Zidalus, Muls. & Rey, loc. cit. p. 296.
Zodinus, Muls. & Rey, loc. cit. p. 315.
Hopatrinus, Gemm. & Harold, Cat. vii. p. 1914.

Species of this genus are found in the warmer parts of both the Old and the New World and also in the Antilles. Two species are found in Central America; these appear, as also do those of North America, to be confined to the Atlantic side of the continent. The genus is recorded from Southern Colombia, but we have not yet received it from our country from south of the Polochic valley in Guatemala.

1. Hopatrinus anthracinus.

Opatrinus anthracinus, Muls. & Rey, Mém. Acad. Lyon, ii. p. 304 (1852)[1]; Dej. Cat. 3rd edit. p. 213.
Opatrinus pullus, Schönh. Dej. Cat. loc. cit.[2]

Hab. Mexico[1] (*coll. F. Bates*), Yucatan[1], Campeachy in Yucatan (*Sallé*), Merida in Yucatan (*Höge*); Guatemala, San Juan and Senahu in Vera Paz, Teleman (*Champion*). —Antilles, Cuba[1], Jamaica[2]; ? Colombia[1].

This species was sent by Herr Höge in great numbers from Yucatan.

2. Hopatrinus mœstus.

Opatrinus mœstus, Muls. & Rey, Mém. Acad. Lyon, ii. p. 307 (1852)[1]; Dej. Cat. 3rd edit. p. 213.

Hab. Mexico[1], Cordova, Cosamaloapam, San Andres Tuxtla (*Sallé*), Vera Cruz, Jalapa (*Höge*); British Honduras, Rio Sarstoon, Rio Hondo (*Blancaneaux*).—South America[1].

Perhaps a small race of *H. anthracinus*.

PEDONŒCES.

Pedonœces, G. R. Waterhouse, Ann. Nat. Hist. xvi. p. 32 (1845).
Tessaromma, Boheman, Res. Eugen., Zool. i. p. 91 (1858).
Lachnoderes, Mulsant and Rey, Ann. Soc. Agr. Lyon, 3rd ser. iii. p. 166 (1859).

Five species of this genus have been described, four from the Galapagos Islands and one from Panama.

1. Pedonœces lugubris.

Tessaromma lugubris, Boh. Res. Eugen., Zool. i. p. 91, t. i. figg. 5, *a–f*[1].

Hab. PANAMA [1].

Unknown to me.

BLAPSTINUS.

Blapstinus, Latreille, Règne Anim. 2nd edit. v. p. 21 (1829); G. R. Waterhouse, Ann. Nat. Hist. xvi. p. 34 (1845); Lacord. Gen. Col. v. p. 250; Muls. & Rey, Ann. Soc. Imp. Agric. de Lyon, 1859, p. 180 (part.); Lec. Class. Col. N. A. p. 227; Horn, Rev. Ten. N. A. p. 351; Lec. & Horn, Class. Col. N. A. p. 379.

Heteropus, Castelnau, Hist. Nat. Col. ii. pt. 1, p. 221.

Aspidius, Muls. & Rey, loc. cit. p. 187.

Species of *Blapstinus* are found throughout temperate and tropical America, the genus ranging from Canada to the Argentine Republic and Chili; one or two species are also found in the Antilles. Dr. Horn (*loc. cit.*) records fourteen species from the United States and Canada. Of the twenty-four species included under this genus in the Munich catalogue not one is given from our country. *Blapstinus* is well represented in Central America by upwards of twenty species, the majority of which are here described as new. The headquarters of the genus appear to be in Central America and the region adjacent to our northern boundary. Various species, mostly undescribed, are known from South America.

The males of some of the species have the anterior tibiæ slightly curved, and swollen in the middle or towards the apex; the metasternum and the ventral surface (the first and second and the base of the third segments) longitudinally excavate, and the last ventral segment flattened in the middle.

The South American genus *Lodinus*, formed by Mulsant and Rey upon a species from Buenos Ayres and Chili, is scarcely separable from *Blapstinus*.

The different species are found beneath stones in open places, also upon the sandy banks of rivers and streams; they are sometimes to be seen running on the ground in sunny weather, and are also to be found by beating low herbage.

* *Winged Species.*

a. *Elytra regularly punctate-striate.*

1. Blapstinus mexicanus.

Opatrinus mexicanus, Sturm, in litt.

Oblong ovate, convex, dark reddish brown, shining, very sparingly clothed with scattered brownish recumbent hairs. Head closely and coarsely punctured, the epistoma broadly but not deeply emarginate; prothorax convex, transverse, the sides rounded, widest about or a little behind the middle, slightly narrower in front than at the base, the angles not very prominent, hind angles obtuse, the base bisinuate, closely and rather coarsely punctured, the punctures more or less confluent towards the sides, separate on the disc, with an indistinct central groove; scutellum finely and closely punctured; elytra convex, regularly

striate, the striæ finely and shallowly punctured, the interstices flat, rather coarsely and distinctly but not very closely punctured; legs reddish brown.

Length 8 millim. (♀.)

Hab. MEXICO (*Sallé, ex coll. Sturm*), Yucatan (*coll. F. Bates*).

Two mutilated examples are all I have seen of this species. Labelled *B. chevrolati*, Pilate, in Mr. F. Bates's collection.

2. **Blapstinus tibialis.** (Tab. VI. fig. 19, ♂.)

Allied to *B. mexicanus*, and differing as follows:—More convex; the thorax widest in the middle, longer and narrower, the sides distinctly narrowed and sinuate before the base, very little broader at the base than at the apex, anterior angles more prominent and subacute, hind angles subrectangular, more equally punctured, the punctures not confluent towards the sides; the elytra sculptured as in that species; legs reddish brown; anterior tibiæ in the male slightly curved, swollen on the inner side about the middle, and narrowing at the base and apex. Beneath shining, rather coarsely punctured and wrinkled; in the male the metasternum and ventral surface towards the base longitudinally excavate in the middle.

Length 7–8 millim. (♂ ♀.)

Hab. GUATEMALA, Zapote, El Reposo, Capetillo, El Tumbador (*Champion*); NICARAGUA, Granada (*Sallé*).

Rather common on the Pacific slope in Guatemala at elevations of from 2000 to 4000 feet. *B. tibialis* may be known from the other described species of the genus by its convex form, the somewhat shining surface, the coarsely punctured interstices of the elytra, and the thickened anterior tibiæ in the male.

3. **Blapstinus grandis.** (Tab. VI. fig. 18, ♂.)

Oblong ovate, convex, dark reddish brown, subopaque, sparingly clothed with recumbent brownish hairs. Head closely and coarsely punctured, the epistoma rather deeply emarginate; prothorax convex, transverse, widest about the middle, the sides rounded and slightly sinuate before the base, anterior angles prominent and subacute, hind angles obliquely rectangular, base strongly bisinuate, closely and rather finely punctured, the punctures separate and finer than those upon the head, with an indistinct central groove; scutellum very closely and finely punctured; elytra regularly punctate-striate, the punctures moderately coarse but not very deeply impressed, the disc slightly depressed, the interstices flat and finely and rather closely punctured, the apices slightly swollen and divergent; legs reddish brown; anterior tibiæ slightly curved in both sexes, slightly swollen from a little before the middle to the apex in the male. Beneath shining, finely and rather closely punctured; in the male the metasternum behind and the ventral surface (the first and second and the base of the third segments) broadly and deeply excavate longitudinally, and the last segment flattened, in the middle.

Length 9½–10½ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt, Janson*).

Apparently rather common at Chontales, and found in some numbers by the late Mr. E. Janson.

4. **Blapstinus interstitialis.** (Tab. VI. fig. 16, ♂.)

Opatrinus punctulatus, Jacq. Duval in Sagra's Hist. de Cuba, vii. (Spanish edit.) p. 60 (1856)[1]; ibid. (French edit.) p. 141 (1857); Dej. Cat. 3rd edit. p. 213 (nec Solier).

Var. *Opatrinus interstitialis* (Chevr.), Dej. Cat. loc. cit.[2]

Hab. ? North America, Texas (*coll. F. Bates*).—Mexico [2], Yucatan (*coll. F. Bates*), Etla, Juquila, Cuernavaca, San Andres Tuxtla, Cordova, Putla, Vera Cruz (*Sallé*), Jalapa, Vera Cruz (*Höge*), Monclova in Coahuila, Minas Viejas, San Luis Potosi (*Dr. Palmer*); Guatemala, near the city, Dueñas (*Salvin*), Yzabal (*Sallé*), near the city, Dueñas, Capetillo, San Joaquin, San Gerónimo, Zapote, Volcan de Atitlan (*Champion*); Nicaragua (*Sallé, coll. F. Bates*), Chontales (*Janson*); Costa Rica (*Van Patten*), Irazu, Cache (*Rogers*); Panama, Caldera, Volcan de Chiriqui, Bugaba (*Champion*).—West Indies, Cuba[1].

This species is abundant throughout Central America; it is also found in Cuba and Texas.

Examples from Dejean's collection from Mexico and Cuba are before me; these are identical with our common Central-American species. The name *B. punctulatus*, Jacq. Duv., having been previously used by Solier (Gay's Hist. Chil. p. 233, 1851) for another species, I adopt the MS. name *B. interstitialis*, Chevr. This species may be known from *B. dilatatus* by the comparatively less transverse thorax, the sides of which are less rounded and wider towards the base, the angles much more distinct, and the surface not so closely and less confluently punctured; the striæ more deeply impressed and the punctures coarser, the interstices more distinctly, less finely, and not so closely punctured; the upper surface more shining. In some examples the sides of the thorax are rather less rounded and straighter towards the base than in others; in one example from Juquila the thorax is broader and more strongly rounded at the sides, though agreeing in all other respects with the very long series of upwards of one hundred examples before me. Labelled *Opatrinus striatus*, Say, in the Sallé collection.

5. **Blapstinus longicollis.**

Elongate oval, subparallel, moderately convex, black, opaque, densely clothed with recumbent brownish hairs. Head coarsely, closely, and equally punctured, the epistoma somewhat deeply emarginate; prothorax feebly convex, comparatively elongate, rather broader than long, widest at the base, the sides almost straight (rarely feebly sinuate) from the middle to the base, and slightly narrowed and rounded anteriorly, the angles prominent and subacute, the base strongly bisinuate, very closely and rather coarsely punctured, the punctures separate and rather finer than upon the head, with an obsolete central channel; scutellum closely and finely punctured; elytra elongate, subparallel, slightly wider than the prothorax at the base, regularly punctate-striate, the punctures moderately coarse, transverse, and somewhat deeply impressed, the interstices flat, finely and not very closely punctured; legs black; anterior tibiæ similar in both sexes. Beneath slightly shining, first and second ventral segments rather coarsely punctured and wrinkled; in the male the metasternum and ventral surface longitudinally and broadly excavate in the middle.

Length $7\frac{1}{2}$–$8\frac{1}{2}$ millim. (♂ ♀.)

Hab. Guatemala, Champerico (*Champion*); Nicaragua, Chontales (*Belt*), Granada (*Sallé*).

Six examples. A comparatively long and narrow species; the upper surface opaque, and densely clothed with recumbent brownish hairs; the thorax long, and the sides almost straight behind. In general form this species resembles somewhat the Old World genus *Gonocephalum*.

6. Blapstinus dilatatus.

Blapstinus dilatatus, Lec. Ann. Lyc. New York, v. p. 146[1]; Horn, Rev. Ten. N. A. p. 353[2].

Hab. North America, Colorado valley[1], Arizona[2].—Mexico, Northern Sonora (*Morrison*).

7. Blapstinus errabundus.

Oblong ovate, convex, dull brownish black, when fresh somewhat thickly clothed with recumbent golden or brownish hairs. Head closely and rather coarsely punctured; prothorax convex, strongly transverse, widest at the base, narrowing anteriorly, the sides feebly sinuate behind the middle, base strongly bisinuate, anterior angles not very prominent and obtuse, hind angles prominent, directed backwards, and subacute, closely and rather coarsely punctured, the punctures not confluent; elytra convex, widest about the middle or towards the base, regularly punctate-striate, the punctures shallow and rather fine, the interstices flat and finely and closely punctured; legs reddish brown; anterior tibiæ similar in both sexes. Beneath slightly shining, finely and sparingly punctured.

Length 5½–6 millim. (♂ ♀.)

Hab. Mexico, Tuxtla (*Sallé*); Nicaragua, Chontales (*Janson*); Panama, San Lorenzo, Peña Blanca (*Champion*).

A few examples. Of the size and form of *B. brevicollis*, Lec., from California, but narrower, more convex, not so dull, and the thorax not confluently punctured. Closely allied to *B. brunnipes*, Dej., from Cayenne; the thorax more distinctly and not so finely punctured.

8. Blapstinus insularis.

Allied to *B. errabundus*, and differing as follows:—Rather more convex; the prothorax rather narrower, not so broad at the base, widest about the middle, the sides nearly straight towards the base, the anterior angles more prominent and less obtuse, rather more coarsely punctured; the elytra rather more convex, widest almost behind the middle, the striæ more deeply impressed (the punctures, however, are not coarser), the interstices feebly convex and more coarsely and not so closely punctured.

Length 6 millim. (♀.)

Hab. Panama, Taboga Island (*Champion*).

One example.

9. Blapstinus umbrosus.

Oblong ovate, rather convex, black, subopaque, clothed with recumbent dark brownish hairs. Head coarsely and closely punctured; prothorax broader than long, widest at the base, narrowing a little anteriorly, slightly rounded at the sides, the angles not very prominent, apex feebly emarginate, base feebly bisinuate, very closely, equally, and rather finely punctured, the punctures here and there confluent; elytra shallowly, finely, and regularly punctate-striate, the punctures subtransverse, the interstices flat towards the suture, feebly convex towards the sides, indistinctly wrinkled transversely, finely, irregularly, and rather sparingly punctured; legs black; anterior tibiæ similar in both sexes.

Length 5–6 millim. (♂ ♀.)

Hab. Mexico, Northern Sonora (*Morrison*).

Many examples received from the late Mr. Morrison as *B. pulverulentus*, Mann.; these do not agree with either of the two or three North-American species standing under that

name in Mr. F. Bates's collection, nor with the description of that species. Smaller duller, and narrower than *B. pratensis*, Lec.; the base of the thorax straighter, and the hind angles less prominent; the striæ more lightly impressed and more finely and less regularly punctured, the interstices less regularly punctured and slightly wrinkled transversely.

From the other species here recorded this species may be known by the very closely and rather finely punctured thorax, and by the dark brownish pubescence of the upper surface.

10. **Blapstinus palmeri.**

Of the size and form of *B. umbrosus*, and differing as follows:—The prothorax not quite so closely punctured, the punctures of the striæ not so fine and more distinct one from another, the interstices flat and finely and closely punctured; not so dull, brownish black or black, the upper surface clothed with a cinereous or light brown pubescence.

Length $5\frac{1}{2}$–6 millim. (♂ ♀.)

Hab. Mexico, San Pedro and Monclova in Coahuila, Guajuco in Nuevo Leon (*Dr. Palmer*).

Several examples.

11. **Blapstinus substriatus.**

Blapstinus substriatus, Laferté, in litt.

Blapstinus anthracinus, Sturm, in litt.

Oblong ovate, moderately convex, black, slightly shining, sparingly clothed with fine cinereous recumbent hairs. Head coarsely and closely punctured; prothorax strongly transverse, widest a little before the base, the sides slightly rounded and almost straight before the base, angles rather obtuse, apex feebly emarginate, base feebly bisinuate and the usual oblique fovea on each side lightly impressed, very closely and rather coarsely punctured, the punctures more or less confluent; elytra regularly and finely punctate-striate, the striæ narrowly and lightly impressed, the interstices flat and closely and rather coarsely punctured; legs black; anterior tibiæ similar in both sexes.

Length $4\frac{1}{2}$–$5\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Puebla, Toluca, Guanajuato (*Sallé*), Jalapa (*Höge*), Valle del Maiz, San Luis Potosi, Parras in Coahuila (*Dr. Palmer*).

Locally common in Mexico. Allied to the North-American *B. pulverulentus*, Mann.; the thorax shorter and more transverse, and the striæ of the elytra finer and more lightly impressed. From *B. mœstus*, Melsh., the species may be known by the less produced hind angles of the thorax, &c.

12. **Blapstinus buqueti.** (Tab. VI. fig. 17, ♂.)

Blapstinus buquetii, Laferté, in litt.

Blapstinus puberulus, Klug, in litt.

Elongate oval, moderately convex, dull brownish black, rather densely clothed with coarse brownish recumbent hairs. Head rather coarsely but not very closely punctured; prothorax transverse, widest at the base, the sides slightly rounded and feebly sinuate before the not very prominent angles, apex rather deeply

emarginate, the base distinctly bisinuate and the usual oblique fovea on each side lightly impressed, rather coarsely, equally, and not very closely punctured; elytra rather long, lightly and finely striate, the striæ in the form of fine shallow impressed lines, the interstices flat, the surface punctured like the prothorax; legs reddish brown, the anterior tibiæ similar in both sexes.

Length 5–6 millim. (♂ ♀.)

Hab. PANAMA, San Miguel in the Pearl Islands (*Champion*).—COLOMBIA; GUIANA, Cayenne (*coll. F. Bates*).

I have only seen three examples (one from each locality) of this species. *B. buqueti* may be known from the other species here described by the coarse uniform punctuation of the upper surface and by the sculpture of the elytra, the striæ of which appear as fine impressed lines, and the surface punctured like the thorax.

13. Blapstinus egenus.

Blapstinus egenus, Dej. Cat. 3rd edit. p. 213.

Oblong ovate, convex, dark reddish brown, slightly shining, clothed with scattered recumbent brownish hairs. Head coarsely and rather closely punctured; prothorax transverse, widest at the base, slightly narrowing anteriorly, the sides slightly rounded and feebly sinuate before the base and apex, the angles somewhat prominent, the apex broadly but not deeply emarginate, the base distinctly bisinuate, the lateral margins slightly thickened, coarsely but not very closely punctured, the punctures separate and scarcely confluent; elytra convex, regularly, shallowly, and coarsely punctate-striate, the interstices flat or feebly convex, rather coarsely and sparingly punctured; legs reddish brown, anterior tibiæ similar in both sexes.

Length 5–5½ millim. (♂ ♀.)

Hab. GUATEMALA (*Sallé*), San Gerónimo, Dueñas, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, La Caldera in Chiriqui (*Champion*).—COLOMBIA, Carthagena.

Taken in plenty at San Gerónimo on the sandy banks of the small streams in that neighbourhood. A small, reddish-brown, convex, slightly shining species; the thorax coarsely punctured, the elytra regularly and rather coarsely punctate-striate, the interstices distinctly and rather coarsely punctured.

14. Blapstinus intermedius.

Of the size and form of *B. egenus*, but differing as follows:—The prothorax more finely and more closely punctured; the elytra regularly but more finely and closely punctate-striate, the interstices more finely and much more closely punctured; the upper surface more sparingly pubescent; legs red or reddish brown; anterior tibiæ similar in both sexes.

Length 5–5½ millim. (♂ ♀.)

Hab. MEXICO (*Sallé*); GUATEMALA, Paraiso (*Champion*); NICARAGUA, Chontales (*Janson*).

Found in plenty at Chontales.

15. Blapstinus sulcipennis. (Tab. VI. fig. 21.)

Oblong ovate, convex, dark reddish brown, slightly shining, very sparingly clothed with brown recumbent

coarsish hairs. Head coarsely and closely punctured; prothorax transverse, widest about the middle, the sides rounded and feebly sinuate before the base, anterior angles obtuse, hind angles rectangular, the base bisinuate, coarsely but not very closely punctured, the punctures not confluent, the disc darker in colour; elytra comparatively short, convex, regularly and very coarsely punctate-striate (almost sulcate), the interstices towards the suture moderately, towards the sides strongly, convex, sparingly but distinctly punctured, scutellar stria deeply impressed; antennæ stout; legs stout, reddish brown, the inner half of the femora darker, anterior tibiæ similar in both sexes.

Length 4–4½ millim. (♂ ♀.)

Hab. Guatemala, Zapote, Las Mercedes (*Champion*).

Four examples. A small, comparatively short, and convex species, with stout legs and antennæ, the thorax coarsely punctured, the elytra coarsely and deeply punctate-striate, the interstices of the elytra strongly convex towards the sides. Smaller and shorter than *B. egenus*, the striæ more deeply impressed and more coarsely punctured, the interstices convex.

16. **Blapstinus nitidus.** (Tab. VI. fig. 15, ♂.)

Elongate oval, moderately convex, black, shining, glabrous. Head coarsely and closely punctured; prothorax transverse, widest at the base, narrowing anteriorly, the sides slightly rounded and feebly sinuate before the somewhat prominent but obtuse angles, the apex broadly but feebly emarginate, the base feebly bisinuate, coarsely but not very closely punctured, the punctures not confluent; elytra regularly punctate-striate, the punctures rather coarse and elongate, the interstices flat and sparingly and finely punctured; legs black; anterior tibiæ in the male abruptly widened on the inner side from the middle to the apex, strongly emarginate towards the base.

Length 4–4½ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*).

Two examples. This small species may be known by its elongate and convex form, the shining and glabrous surface, and the structure of the anterior tibiæ in the male.

17. **Blapstinus longipennis.**

Elongate oval, subparallel, moderately convex, brownish black, slightly shining, sparingly clothed with cinereous pubescence. Head coarsely and rather closely punctured; prothorax strongly transverse, widest at the base, very slightly narrowing anteriorly, the angles not very prominent, the apex feebly emarginate, the base very feebly bisinuate, the sides slightly rounded, the disc feebly impressed just before the base, rather coarsely but not very closely punctured, the punctures separate; elytra more than twice as long as the prothorax, subparallel, regularly, closely, shallowly, and rather coarsely punctate-striate, the interstices flat and rather coarsely but not very closely punctured; legs brownish black, the knees paler.

Length 6–6½ millim. (♂ ♀.)

Hab. Mexico, Presidio (*Forrer*).

Allied to but probably distinct, judging from the description, from *B. longulus*, Lec.; larger, longer, more convex, and more shining than *B. atratus*, the sides of the thorax more rounded and the hind angles more obtuse, the interstices of the elytra more distinctly punctured.

18. **Blapstinus longulus.**

Blapstinus longulus, Lec. Ann. Lyc. New York, v. p. 147 [1]; Horn, Rev. Ten. N. A. p. 354 [2].

Hab. North America, River Gila [1], Southern Arizona [2].

Found on our northern frontier.

19. **Blapstinus atratus.** (Tab. VI. fig. 20.)

Elongate oval, subparallel, moderately convex, dull black, when fresh sparingly clothed with fine recumbent cinereous hairs. Head closely and coarsely punctured; prothorax strongly transverse, widest at the base, slightly narrowing anteriorly, the sides very feebly rounded and sinuate before the base, apex feebly emarginate, base feebly bisinuate, anterior angles obtuse, hind angles rectangular or subacute, closely and rather finely punctured, the punctures separate; elytra rather long, subparallel, regularly, shallowly, and rather finely punctate-striate, the interstices flat and finely and rather closely punctured; legs black, the tibiæ paler; anterior tibiæ similar in both sexes.

Length 4–5 millim. (♂ ♀.)

Hab. Mexico, Tehuacan (*Höge*); Guatemala (*Sallé*), near the city, San Joaquin, San Gerónimo, Panajachel, Champerico, Zapote, El Jicaro (*Champion*); Nicaragua (*Sallé*); Panama, Taboga Island (*Champion*).

Rather common in Guatemala. A small, narrow, dull black species, not very closely allied to any other recorded here. A closely-allied form is found in the island of Santo Domingo.

b. *Elytra with the striæ interrupted.*

20. **Blapstinus emmenastoides.** (Tab. VI. fig. 22.)

Oblong ovate, convex, dull brownish black, with a slight bronzy tinge, rather densely clothed with light brown or cinereous coarsish recumbent hairs. Head coarsely and very closely punctured; prothorax convex, transverse, widest at the base, narrowing anteriorly, the sides slightly rounded and feebly sinuate before the angles, apex rather deeply emarginate, base strongly bisinuate, angles somewhat prominent, very closely and coarsely punctured, the punctures more or less confluent anteriorly and towards the sides; elytra convex, shallowly and rather finely punctate-striate, the striæ lightly impressed and more or less interrupted, and the punctures coarser towards the sides, the interstices flat, and closely, irregularly, and rather coarsely punctured; legs black; anterior tibiæ similar in both sexes; the anterior tarsi not very strongly dilated in the male. Beneath slightly shining, rather coarsely punctured and longitudinally wrinkled.

Length 5–6 millim. (♂ ♀.)

Hab. Mexico, Juquila (*Sallé*), Jalapa (*Höge*); Guatemala, Yzabal (*Sallé*), Aceytuno (*Salvin*), Ostuncalco 7500 feet, San Martin, Quezaltenango, Panajachel, Capetillo, Cerro Zunil, Dueñas (*Champion*).

Common beneath stones in the 'Los Altos' region of Guatemala. A small, dull, convex species, the thorax coarsely and almost confluently punctured, the striæ of the elytra more or less interrupted.

** *Apterous Species.*

21. **Blapstinus obliteratus.**

Oblong ovate, rather convex, black, opaque, almost glabrous, very sparingly clothed with fine recumbent blackish hairs. Head coarsely and not very closely punctured, the epistoma somewhat deeply emarginate; prothorax transverse, widest about the middle, scarcely broader at the base than at the apex, the sides rounded and almost straight towards the base, anterior angles obtuse, hind angles subrectangular, apex broadly but feebly emarginate, base feebly bisinuate and without any trace of the usual shallow fovea on each side, coarsely but not closely punctured, the punctures not confluent; scutellum finely and closely punctured; elytra regularly striate, the striæ rather deeply impressed and finely and not very closely punctured, the interstices feebly convex, and very finely, shallowly, and sparingly punctured; legs black; apterous.

Length 6 millim. (♀.)

Hab. Panama, Chiriqui (*Ribbe*).

One example. Of a different facies from any species of the genus known to me; the thorax comparatively very coarsely, equally, but not very closely punctured; the interstices of the elytra very finely and sparingly punctate.

NOTIBIUS.

Notibius, Leconte, Ann. Lyc. New York, v. p. 145 (1852); Class. Col. N. A. p. 227; Horn, Rev. Ten. N. A. p. 355; Lec. & Horn, Class. Col. N. A. p. 379.

Six species of this genus are known, all from the desert regions of California and Arizona; we now add two others from Central Mexico.

1. **Notibius rugipes.**

Oblong ovate, convex, dull black, when fresh sparingly clothed with dark brownish pubescence. Head very closely and rather coarsely punctured, the punctures more or less longitudinally confluent; prothorax convex, broader than long, the sides rounded, narrowed at base and apex, and narrowly margined, widest at or a little behind the middle, apex very feebly emarginate, base subtruncate, all the angles strongly obtuse and not prominent, very closely and finely punctured, the punctures longitudinally confluent towards the sides, the disc sometimes feebly impressed behind the middle, not closely embracing the elytra; scutellum indistinct; elytra convex, slightly rounded at the sides, widest before the middle, the humeri obsolete and broadly and obliquely rounded (not meeting the hind angles of the prothorax), regularly, finely, and closely punctate-striate, the interstices flat, distinctly, sparingly, and rather coarsely punctured, the punctures very little finer than those of the striæ; legs black, coarsely punctured, anterior tibiæ similar in both sexes, in the male rather longer and stouter (the femora especially), and the posterior tibiæ on the inner side from the middle to the apex clothed with longish fulvous hairs. Beneath slightly shining, coarsely muricate-punctate, the last ventral segment in the male transversely excavate; intercoxal process broadly truncate at the apex.

Length 6–6½ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Puebla (*Sallé*), Tehuacan (*Höge*).

Sent in some numbers by Herr Höge. Of the size and general form of *N. opacus*, Lec., and *N. sulcatus*, Lec., but not very nearly allied to any described species.

2. **Notibius affinis.** (Tab. VI. fig. 11, ♂.)

Allied to *N. rugipes*, and differing as follows:—The head and prothorax more closely and more confluently

punctured; the prothorax broader and more transverse, the anterior angles subacute, the hind angles subrectangular, the apex more distinctly emarginate; elytra as in *N. rugipes*; slightly larger and broader in form.

Length 6–7 millim. (♂ ♀.)

Hab. MEXICO, Tehuacan (*Höge*).

Two examples. Found in company with *N. rugipes*.

CONIBIUS.

Conibius, Leconte, Ann. Lyc. New York, v. p. 145 (1852); Class. Col. N. A. p. 227; Horn, Rev. Ten. N. A. p. 350; Lec. & Horn, Class. Col. N. A. p. 379.

Three species of this genus are known from California; we now add another from Mexico and Guatemala.

1. **Conibius brunnipes.** (Tab. VI. fig. 12.)

Heterophaga brunnipes, Sturm in litt.

Elongate oval, subparallel, convex, black, rarely reddish brown, shining, glabrous. Head closely but not very coarsely punctured; prothorax broader than long, broadest before the middle, the sides rounded anteriorly, slightly narrowing behind, and feebly sinuate just before the base, the anterior angles obtuse, the hind angles subrectangular, apex feebly emarginate, the base subtruncate, lateral margins distinct, very closely and finely punctured, the punctures separate on the disc and slightly confluent at the sides; elytra scarcely wider than the prothorax, the base subtruncate, finely, narrowly, and very shallowly punctate-striate, the striæ more or less interrupted, the interstices flat and very closely and finely punctured; legs robust. Beneath slightly shining, the ventral surface finely and sparingly muricate-punctate; intercoxal process narrow, the apex rounded.

Length 5–5½ millim. (♂ ♀.)

Hab. MEXICO (*coll. F. Bates, Sallé ex coll. Sturm*), Yolos, Puebla, Guanajuato, Capulalpam (*Sallé*), Tehuacan, Oaxaca (*Höge*); GUATEMALA, near the city (*Salvin*), El Jicaro (*Champion*).

Not uncommon in Mexico. Allied to *C. seriatus*, Lec., from the Colorado Desert, but larger, the thorax more distinctly margined at the sides, the elytra differently sculptured, and the legs stouter. Specimens occasionally occur with the suture reddish, or entirely reddish-brown in colour.

ULUS.

Ulus, Horn, Rev. Ten. N. A. p. 358; Lec. & Horn, Class. Col. N. A. p. 379 (1883).

Two species of this genus have been recorded from California; others are found in Central America, the genus ranging as far south as Panama. The different species are found beneath stones, both on the coast and inland.

1. **Ulus hirsutus.** (Tab. VI. fig. 13.)

Ovate, convex, brownish black, with an æneous tinge, densely clothed with rather coarse cinereous, golden, or brownish recumbent hairs. Head very closely, rather coarsely, and almost confluently punctured; prothorax broadest at the base, feebly rounded at the sides, narrowing anteriorly, strongly transverse in the

female, narrower in the male, punctured like the head, the angles prominent, the base with an oblique shallow impression on each side about the middle; elytra closely and rather coarsely punctate-striate, the striæ deeply impressed, the interstices closely and irregularly wrinkled (transversely) and punctured; outer apical angle of the anterior tibiæ produced into a strong blunt tooth; intermediate and posterior tibiæ coarsely roughened and setose.

Length 6–7 millim. (♂ ♀.)

Hab. Mexico, Ventanas, Presidio (*Forrer*), Cordova (*Sallé*), Tehuacan, Jalapa (*Höge*), Yucatan (*coll. F. Bates*); Guatemala, San Gerónimo (*Champion*); Panama, San Feliz, Bugaba (*Champion*), Obispo (*Salvin*).

Allied to *U. obliquus*, Horn, from Cape San Lucas, the thorax formed as in that species, and differing as follows:—The upper surface closely but less regularly clothed with rather coarser and browner pubescence, the sides of the thorax less thickly pubescent, the striæ more deeply impressed, and the punctures coarser. In the male the thorax is narrower and less transverse than in the female; fresh examples are densely clothed with brownish or golden, short, recumbent hairs.

In some examples the interstices of the elytra are distinctly wrinkled transversely, and more closely punctured than in others.

2. **Ulus lineatulus.** (Tab. VI. fig. 14.)

Broad ovate, convex, brownish black, sparingly clothed with rather fine cinereous pubescence. Head rather closely and coarsely punctured; prothorax widest at and narrowing from the base forwards, scarcely rounded at the sides, not very convex, closely and rather coarsely but not confluently punctured, the punctuation a little finer and more scattered than upon the head; elytra narrowing from about the middle, somewhat pointed behind, closely punctate-striate, the interstices very closely, finely, and irregularly punctured and wrinkled, the pubescence on the alternate interstices lighter in colour towards the sides; anterior tibiæ gradually widening to the apex, the outer edge scarcely emarginate before the apex; intermediate and posterior tibiæ coarsely roughened and setose.

Length 6½–7 millim. (♂ ♀.)

Hab. Guatemala, Champerico, Las Mercedes (*Champion*).

Common on the sea-coast at Champerico and also found inland. *U. lineatulus* may be known from *U. obliquus* and *U. hirsutus* by the more distant and finer punctuation of the less convex but similarly formed thorax, the elytra more pointed behind, the upper surface more finely and sparingly pubescent.

The following genus is of uncertain position:—

PENICHRUS.

Penichrus, Dej. Cat. 3rd edit. p. 231.

Mentum small, narrow, trapeziform, inflexed on each side anteriorly, the anterior angles indistinct; last joint of the maxillary palpi triangular; antennæ very stout from the base, long, passing the base of the prothorax, third joint short and not equalling the united first and second, the joints from the third decreasing in length and widening outwardly, eighth to tenth broad and transverse, eleventh very large, and almost equalling the united ninth and tenth, finely and sparingly setose (in our species), or with shorter and coarser projecting setæ (*P. nanus*, Dej.); head long (the front especially), broad in front and scarcely narrowing anteriorly, not deeply sunk into the prothorax; the epistoma broadly but feebly emarginate,

confounded with the front; the lateral margins of the front (antennary orbits) swollen, slightly divergent, scarcely impinging on the eyes behind; eyes prominent, lateral, coarsely granulated, distant, transverse oval, almost entire; labrum prominent, transverse; prothorax subquadrangular, distinctly margined, much narrower than the elytra; scutellum small, narrow; elytra more than twice as long as the prothorax, convex, the base nearly straight, the humeri rounded, somewhat rounded at the sides, widest behind the middle, then narrowed to the apex, regularly crenate-striate, the interstices feebly convex, the epipleuræ narrowing gradually from the base and scarcely reaching the apex; legs much as in *Blapstinus*, smooth; tarsi clothed with fine silky hairs beneath, the fourth joint of the anterior and intermediate pairs small, the anterior pair in the male dilated and clothed with spongy hair beneath; prosternum narrow, deflexed behind; intercoxal process broad, rounded in front; middle coxal cavities almost closed, trochantin scarcely visible; in the male the first and second ventral segments flattened and longitudinally excavate, and the last segment slightly flattened, in the middle. Form of *Blapstinus*. Winged.

The above characters have been drawn up to receive the undescribed *Penichrus nanus*, Dej., from Colombia and Brazil, and a closely allied species from the State of Panama.

In spite of the differently-formed head, &c., this genus seems to me to be nearly allied to the "Pedinides"; in the male the anterior tarsi are distinctly dilated and spongy beneath, and the ventral surface is longitudinally excavate in the middle, as in certain *Blapstinus*, to a small species of which *Penichrus* bears considerable resemblance.

1. **Penichrus blapstinoides.** (Tab. VI. fig. 23, ♂.)

Oblong ovate, convex, reddish brown or black, with a distinct æneous or brassy tinge, slightly shining, sparingly clothed with fine short cinereous pubescence. Head finely and closely punctured; prothorax rather broader than long, the sides rounded before the middle and straight and slightly narrowing behind, widest before the middle, the apex nearly straight, the base feebly bisinuate and with a shallow oblique fovea on each side about the middle, anterior angles obtuse, hind angles rectangular, the disc slightly impressed before the base, finely, closely, and equally punctured; elytra much wider than the prothorax, regularly crenate-striate from base to apex, the interstices convex, exceedingly finely and closely punctured; legs reddish brown, the femora darker. Beneath closely and rather finely punctured.

Length 4 millim. (♂ ♀.)

Hab. PANAMA, near the city, David (*Champion*).

Four examples beaten from the flowers of a large tree.

Group HOPATRIDES.

This group is represented in our country by two genera only; exceedingly few genera or species of Hopatrides are found in the New World.

TRICHOTON.

Trichoton, Hope, Coleopt. Manual, iii. p. 111; Lacord. Gen. Col. v. p. 275.
Epilasium, Blanchard, Hist. Nat. Ins. ii. p. 14; Dej. Cat. 3rd edit. p. 214.

Two or three species of this genus are known from South America, and one has been described from the island of Guam; *Blapstinus sordidus*, Lec., from Arizona, is possibly referable to it. Two species, both apparently undescribed, are found in Central America.

1. **Trichoton lapidicola.**

Trichoton lapidicola, Haag in litt.

Broad ovate, dull black, clothed with coarse light brown or ferruginous appressed scale-like hairs, and the upper surface also with scattered suberect short stout bristly hairs. Head rather coarsely but not very closely punctured; prothorax irregularly, sparingly, and rather closely punctured (more closely towards the base), the anterior half of the disc smoother, somewhat densely clothed with scales towards the sides, the disc from base to apex more or less bare; elytra rounded at the sides, regularly and closely punctate-striate, the punctures coarse and transverse, the interstices smooth or feebly wrinkled, convex from the third outwardly (the third, fifth, and seventh more distinctly raised and broader), the pubescence arranged in scattered tufts; anterior tibiæ in the male stout, gradually widening outwardly, inwardly curved from the middle, and obliquely truncated at the apex.

Length 7–7½ millim. (♂.)

Hab. NICARAGUA, Granada (*Sallé*), Chontales (*Belt*).—SOUTH AMERICA, Venezuela (*coll. F. Bates*).

Single examples only from each locality.

2. **Trichoton curvipes.** (Tab. VI. fig. 25, ♂.)

Narrower and more parallel in form than *T. lapidicola*, not so dull, slightly shining (when the scales are removed); the prothorax more closely punctured, the expanded lateral margins rather less concave (especially anteriorly) within; the elytra longer and narrower and more parallel, the upper surface (in addition to the usual scale-like pubescence) more thickly clothed with suberect short ferruginous bristly hairs; the anterior tibiæ in the male thin, slightly widening outwardly, abruptly twisted and inwardly curved before the apex, and the intermediate and posterior tibiæ in the same sex slightly widened, curved, and produced at their inner apices, before which very narrowly emarginate.

Length 7–7½ millim. (♂ ♀.)

Hab. PANAMA, near the city (*J. J. Walker*).

Three examples differing as above.

CNEMEPLATIA.

Cnemeplatia, Costa, Ann. degl. aspir. Nat. ser. 2, i. p. 146 (1847); Horn, Rev. Ten. N. A. p. 360; Lec. & Horn, Class. Col. N. A. p. 380.

Autocera, Wollaston, Cat. Col. Madeira, p. 154, t. 1. figg. 2, *a–f*; Lacord. Gen. Col. v. p. 280.

Two or three species of this minute but interesting and widely distributed genus have been described from the Mediterranean region, one from Madeira, and one from California; we have to add yet another species from the State of Panama. An allied genus devoid of eyes (*Alaudes*, Horn) is found in California.

1. **Cnemeplatia laticollis.** (Tab. VI. fig. 24.)

Elongate oval, subparallel, feebly convex, somewhat depressed above, pitchy or dark reddish brown, clothed with yellowish brown silky appressed scale-like pubescence. Head very broad, short, feebly emarginate in front, base almost truncate and extending (very narrowly) on each side as far as the small and not very prominent eyes, with a curved oblique impressed line (starting from the inner upper margin of the eyes, and extending forwards, but not reaching the middle) on each side, closely and finely punctured; prothorax strongly transverse, the base and apex feebly bisinuate, the sides feebly rounded and slightly narrower at

the base than in front, anterior angles obtuse, hind angles subrectangular, the base with a shallow rounded impression in the middle before the scutellum, closely and finely punctured, covered with smooth silky scale-like pubescence (paler towards the sides and base, the disc darker anteriorly); elytra about as wide as the thorax, broadly but feebly emarginate at the base, somewhat coarsely, closely, and regularly punctate-striate, the interstices flat, densely clothed with scale-like pubescence, in fresh examples the base and the alternate interstices paler; spurs of the anterior tibiæ long and subequal; winged.

Length 3 millim.

Hab. PANAMA, San Feliz, Bugaba (*Champion*).

Three examples, all of which were captured on the wing towards sunset.

C. laticollis may be known from the described species of the genus by the comparatively shorter and broader head and thorax, the small eyes, and the flat interstices of the elytra, &c.; the spurs of the anterior tibiæ long and subequal. This is one of the smallest known species of the group.

Group CRYPTICIDES.

This group will contain one genus (*Crypticus*) only.

CRYPTICUS.

Crypticus, Latreille, Règne Anim. 1st edit. iii. p. 298 (1817); Lacord. Gen. Col. v. p. 223; Horn, Rev. Ten. of Am. north of Mexico, p. 362; Lec. & Horn, Class. Col. N. A. 1883, p. 380.

A very widely distributed genus; species are found in Europe (including England), the Canary Islands, South Africa, the Atlantic region of North America, South America, &c.; we now add four, all of small size, from Central America. The different species are found in hot, dry, arid places at the roots of grass, &c., both inland and on the coast.

1. Crypticus ovatus.

Ovate, convex, black, with a slight æneous tinge, shining, glabrous. Head closely and very finely punctured; prothorax finely and more sparingly punctured; elytra the width of the prothorax at the base, similarly punctured, and with traces of fine obsolete striæ; antennæ (the two basal joints excepted) black; legs reddish brown; prosternum narrow, horizontal, the apex produced.

Length 3–3½ millim. (♂ ♀.)

Hab. GUATEMALA, Champerico (*Champion*).

Common at roots of grass &c. on the sea-coast at Champerico. A small, shining, black species of regularly elliptic outline; the thorax equally rounded and narrowed with the elytra; shorter and more convex than the North-American *C. obsoletus*, Say.

2. Crypticus mexicanus.

Ovate, rather broad, black, shining. Head closely and very finely punctured; prothorax exceedingly finely

and sparingly punctured; elytra finely and regularly punctate-striate, the striæ more distinct towards the suture, the interstices punctured like the prothorax.
Length 4 millim.

Hab. MEXICO, Jalapa (*Höge*).

One example. Larger, broader, and smoother than *C. ovatus*, the elytra finely punctate-striate, the interstices almost smooth; allied undescribed forms are known from South America.

3. **Crypticus aterrimus.**

Crypticus aterrimus, Dej. Cat. 3rd edit. p. 215 [1].

Regularly ovate, convex, opaque, dull black. Head exceedingly finely and sparingly punctured; prothorax transverse, rounded at the sides, narrowing from the base, the surface (and that of the elytra also) apparently impunctate (if viewed with a strong lens, some minute scattered punctures are visible), dull and opaque; elytra the width of the prothorax at the base, rounded at the sides, narrowing from the base; legs piceous, the knees and tarsi sometimes reddish testaceous; antennæ piceous.
Length 4 millim. (♂ ♀.)

Hab. MEXICO, without locality (*Höge*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, La Tinta in the Polochic valley (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).—GUIANA, Cayenne [1] (*coll. F. Bates*).

A perfectly ovate, small, and convex species; the upper surface dull and opaque; the prothorax in the female rather narrower in front, the general outline in consequence more elliptic than in the male.

4. **Crypticus maculatus.** (Tab. VII. fig. 1.)

Ovate, reddish brown or black, with a slight æneous tinge, shining. Head closely and finely, the prothorax rather more sparingly and finely, punctured; elytra punctured like the prothorax, with indistinct traces of obsolete striæ, and maculated with testaceous—a broad oblique band starting from the shoulder and extending about halfway towards the suture (not reaching beyond the middle), and a broad curved band at the apex (this starting transversely from the margin turns abruptly before reaching the suture, and extends almost parallel with it to the apex); the antennæ at the base and the legs testaceous, sometimes slightly darker.
Length 3–3½ millim. (♂ ♀.)

Hab. GUATEMALA, Yzabal (*Sallé*); NICARAGUA, Granada (*Sallé*), Chontales (*Janson*).

Four examples. A specimen from Yzabal is figured.

Group **PHRENAPATIDES.**

This group contains *Phrenapates*, *Delognatha*, and a new genus described here, and probably also *Pycnochilus*, Waterh., from Madagascar. *Delognatha* has not yet been received from our country; one or two species, however, are known from Colombia.

PHRENAPATES.

Phrenapates, Kirby, Faun. Bor. Am. iv. p. 188 (1837); Gray in Griffith's Anim. Kingdom, p. 91, t. 50. fig. 1, & t. 69. figg. 1 *a*–1 *m*; Castelnau, Hist. Nat. ii. p. 217; Imhoff, Versuch ein. Einführ. in d. Stud. d. Col. p. 234; Lacordaire, Gen. Col. v. p. 313.

Phrepates, Solier, Ann. Soc. Ent. Fr. 1834, p. 488.

This remarkable genus contains two closely allied species of large size, both inhabiting Colombia; one of these we now trace as far north as Guatemala. *Phrenapates* bears a certain superficial resemblance to *Passalus*, and was indeed considered by its describer to be closely related to that genus; it is of similar habits, and often found in company with species of that genus.

1. Phrenapates bennetti.

Phrenapates bennettii, Kirby, loc. cit.[1]; Gray, loc. cit.[2]; Cast. loc. cit.[3]; Lac. loc. cit.[4]

Hab. Guatemala, Coban (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*); Costa Rica (*Van Patten*), Irazu (*Rogers*); Panama, Bugaba, Volcan de Chiriqui to 4000 feet (*Champion*).—Colombia[3 4], Choco[1 2], Bogota (*coll. F. Bates*).

This species is closely allied to *P. latreillei*, and differs solely from that species in the shape of the ligula and mentum; it varies considerably in size, and also in the presence or absence of wrinkles upon the head; some of the Nicaraguan specimens are no larger than *P. latreillei*. I met with *P. bennetti* in plenty in decaying timber in the humid forest region of Chiriqui, and frequently dug it out of cylindrical burrows, probably made by the larvæ, in the solid wood.

DAOCHUS.

Mentum transverse, the sides deflexed and deeply concave within, the anterior angles rounded; antennary orbits not swollen, broadly, but feebly, emarginate; ligula strongly exserted, very large and prominent, rounded in front, and with a deep rounded excavation (separated by a strong longitudinal carina) on each side, and into which the labial palpi are inserted; inner lobe of the maxillæ armed on the inner side, and the outer lobe at the apex, with long coarse setæ; last joint of the maxillary, and also that of the labial, palpi elongate ovate, rounded at the apex; mandibles long, stout, exserted, deeply cleft at the apex, concave within at the base above (for the reception of the prominent labrum, which is rounded in front); antennæ perfoliate, short (not reaching to the middle of the prothorax), the basal joint stout, the third short and scarcely as long as the united fourth and fifth, the fourth to the eighth transverse, and gradually widening outwardly, the ninth and tenth suddenly wider, strongly transverse, and forming with the eleventh (which is nearly as long as the united ninth and tenth, and rounded at the apex) a distinct 3-jointed club, the last three or four joints setose; head very broad, angularly extended on each side, not deeply sunk into the prothorax; epistoma confounded with the front, the anterior portion abruptly déclivous, broadly, but not deeply, emarginate; antennary orbits not swollen, broadly but feebly emarginate; eyes rather small, inserted at the extremity of the lateral angular extension of the sides of the head, rounded, distant from the thorax, the inferior portion small, very feebly emarginate in front; prothorax strongly transverse, transversely convex, the sides and base strongly margined, the basal half of the former crenulate; scutellum very minute, almost obsolete; elytra very short and convex, scarcely one and a half times the length of the prothorax, truncate at the base, very coarsely and deeply punctate-striate (the stria next the suture extending in a straight line direct to the base, the scutellar stria

obsolete), the humeri prominent (formed by the extended margin); anterior tibiæ coarsely, the intermediate ones more finely, denticulate on their outer edge; outer apical angles of all the tibiæ produced and dentiform, the spurs strong; tarsi short, the basal joint of the posterior pair stout and a little longer than the two following joints united, the last joint thin and about as long as the first; prosternum broad, subhorizontal, the apex a little produced and rounded; metasternum short; intercoxal process broad, rounded in front; epipleuræ broad, and extending to the apex of the elytra.

The above characters have been drawn up to receive a single species from British Honduras.

From *Delognatha*, Lac., of which several species have been described from Tropical South America, this genus may be known by its much shorter and more convex form, the lateral margins of the front not swollen, the almost obsolete scutellum, the more prominent humeri, the comparatively much shorter elytra, &c.; allied also, but more distantly, to *Pycnochilus*, Waterh.

The sexes appear to be externally similar as in *Phrenapates*.

1. **Daochus mandibularis.** (Tab. VII. fig. 2; 2 *a*, labium; 2 *b*, maxilla and maxillary palpus.)

Oblong ovate, broad, very convex, reddish brown or black, shining. Head and labrum coarsely and closely punctured; prothorax strongly transverse, the anterior angles produced and prominent, but obtuse, widest about the middle, narrowing a little at the base, the base truncate (without foveæ), the surface very coarsely and somewhat closely punctured (rather more sparingly than the head), the space between the punctures (seen under a strong lens) exceedingly minutely and closely punctured; elytra the width of the prothorax at the base, very short and convex, slightly rounded at the sides, widest about the middle, very coarsely and deeply punctate-striate (the punctures transverse and closely placed), the interstices becoming strongly convex outwardly, and almost smooth; beneath shining, coarsely and rather closely punctured.

Length 6–7 millim.

Hab. British Honduras, R. Sarstoon (*Blancaneaux*).

Two examples.

Group **ULOMIDES.**

This group will contain a large number of genera, many of which will doubtless eventually have to be separated, but for the purposes of this work I have not thought it necessary to divide it. As understood here, it will include the genera placed in it by Lacordaire, except *Anepsius*, and those from *Hypophlœus* onwards; and also those included in it by Leconte and Horn (Class. Coll. N. A. 1883, p. 381), with the exception of *Evoplus*, which is here referred to the group "Diaperides," to which group *Hypophlœus* is also now considered to belong. I have also included in it *Sitophagus* and *Doliema* (=*Sitophagus*, Horn), which seems to me to be more nearly allied to the "Ulomides," notwithstanding the differences in the structure of the male antennæ and the slightly gaping middle coxal cavities (the small trochantin in consequence slightly visible, as is also the case in *Mophis*), than to the "Tenebrionides," with which *Doliema* is associated by Dr. Horn: possibly they will form the types of a new group.

For the reception of the numerous Central-American species many new genera have

been required; several of these contain one or two species only, as is also the case with others inhabiting North America.

Taken as a whole, the species of this group are, in spite of their usually sombre colours, interesting on account of the exceedingly good characters afforded by the males of many species, characters often of generic value: in some genera, *Uloma*, *Uleda*, and *Pheres*, the anterior (and sometimes the intermediate) tibiæ are more or less sinuous and dilated, and often coarsely denticulate on their outer edge, or armed on the inner side or beneath with a sharp tooth; others, the well-known *Gnathocerus* and allies, *Ulosonia*, *Sitophagus*, and *Doliema*, have the head armed with long (curved or horizontal) horns; these latter having the legs thin and similar in both sexes. Other genera, *Telchis*, *Peneta*, *Cleolaus*, *Arrhabœus*, and *Diœdus*, all containing species of small size, are very convex; the antennæ with a distinct 2- or 3-jointed club, the two front pairs of tibiæ coarsely denticulate on their outer edge (*Diœdus* excepted), and the sexes (*Peneta* excepted) externally similar; *Peneta* approaching *Daochus* of the preceding group, but wanting the long exserted mandibles.

In the male of *Antimachus* the head is armed with a long and erect horn (broadly dilated and bifurcate at the apex), the anterior angles of the thorax produced into a long, horizontal, tooth-like projection, and the anterior tibiæ (though smooth on their outer edge in both sexes) triangularly extended on their inner side in the middle. In *Alegoria* the penultimate joint of the tarsi is distinctly sub-bilobed. *Mophis* and *Æsymnus* approach the "Diaperides;" in the males of one or two species of *Sitophagus* and *Doliema* the antennæ are long, and with the joints subtriangular, but in the same sex of other new species described here these organs are normal, and resemble those of the females.

Some of the species are perfectly flat (*Doliema*), others cylindrical (*Iccius*, &c.); a few (*Gnathocerus* and allies, *Doliema frontalis*, and *Sitophagus dilatifrons*) have the head expanded and foliaceous anteriorly in the male; some have a very broad and deep transverse excavation on the anterior disc of the prothorax, *e. g.* in the male of *Antimachus*, and of some species of *Uloma*, and probably in both sexes of *Cleolaus* and *Telchis*.

The whole of the Central-American species are probably of subcortical habits; one or two have apparently taken subsequently to a different mode of life, having been (like other species now rapidly becoming cosmopolitan) found in bad flour.

PENETA.

Peneta, sect. (1) A, Lacordaire, Gen. Col. v. p. 319, nota (1859).

I here retain the generic name *Peneta* solely for the *P. lebasii* group as defined by Lacordaire. The other species, notably *P. sommeri*, differ in so many important structural characters, as pointed out by Lacordaire, that I do not feel justified in considering them congeneric. It is probable that, judging from examples of *P. lebasii*

in Mr. F. Bates's collection, the sexes in the *P. lebasii* group differ considerably in the cephalic armature, and that the horns upon the vertex are strongly bifurcate in the male, and subtriangular in the female. *P. sommeri* will form the type of a new genus, *Cleolaus*.

By separating these species, the third group of Lacordaire (containing the South-American *P. taurus*, Lac., *P. goudotii*, Lac., and *P. cervus*, F. Bates, which all have enormously developed, erect, curved horns upon the head, a large scutellum, &c.) will require a new name; it might be called *Molion*.

P. lebasii is a native of Colombia; we now add an allied species from the State of Panama.

1. **Peneta panamensis.** (Tab. VII. fig. 3; 3 *a*, antenna.)

Elongate ovate, very convex, subparallel, dark reddish brown, shining. Head with some scattered shallow rather coarse punctures, the anterior margin very strongly raised and reflexed (ending immediately above the eyes, and not extending along their inner margin), the vertex with a stout erect subtriangular longitudinal elevation on each side (placed some distance behind and just within the eyes), extending obliquely inwards in front to the anterior margin; prothorax transverse, the anterior angles prominent but not swollen, the hind angles obtuse and rounded, narrowing a little anteriorly, the sides straight from the middle to the base, the surface with scattered rather coarse punctures (which are placed more closely along the anterior margin); scutellum small, transverse; elytra very coarsely punctate-striate, the interstices convex and almost smooth; beneath shining, the sides of the metasternum and the ventral surface with coarse scattered punctures; prosternum declivous behind, the apex not produced; metasternum deeply canaliculate behind; antennæ with a stout, loosely articulated 3-jointed club, the last joint ovate; epipleuræ extending to the apex of the elytra.

Length 6½ millim. (♀?)

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

One example.

CLEOLAUS.

Peneta, sect. (1) B, Lacordaire, Gen. Col. v. p. 319, nota (1859).

This genus, as understood here, will contain a single species from Mexico.

1. **Cleolaus sommeri.** (Tab. VII. fig. 4.)

Peneta sommeri, Lac. loc. cit. p. 319, nota[1].

Hab. Mexico[1] (*Sallé*), Oaxaca (*coll. F. Bates*).

The head in this very short and broadly convex species is similarly formed in both sexes, and sunk into the prothorax as far as the eyes, the scutellum almost obsolete, the prothorax broadly and deeply transversely excavate anteriorly, and the epipleuræ very broad almost to the apex.

TELCHIS.

Mentum trapeziform, strongly deflexed on either side, the anterior angles produced, deeply bisinuate in front; inner and outer lobes of the maxillæ armed with long coarse setæ; last joint of the maxillary palpi oblong

ovate; mandibles extending a little beyond the prominent exserted labrum (which is separated from the epistoma by a distinct clypeus), bifid at the apex; antennæ short (reaching only to the first third of the prothorax), perfoliate, the first and second joints stout, the second short, the third to the eighth very short, strongly transverse, very closely articulated, and slightly widening outwardly, the ninth joint fully twice the width of the eighth, the ninth to the eleventh forming a very large, loosely articulated club, the joints of which are strongly and broadly produced on the inner side, the eleventh bluntly rounded at the apex, the joints of the club (and the labrum) coarsely setose; head long, strongly exserted, the lateral margins of the front slightly swollen, and extending triangularly forwards beyond the epistoma (which is broadly but not deeply emarginate in front), and not impinging on the eyes behind; eyes lateral, distant from the prothorax, not very large, the superior portion rounded, the space between them armed with a strong erect transverse prominence (which is distant from the eyes, extends forwards, and is abruptly declivous in front, and covers in greater part the short epistoma); prothorax rather broader than long, longitudinally convex, distinctly margined at the sides, the disc deeply excavated in the middle; scutellum small, narrow; elytra rather wider than and closely embraced by the prothorax, about twice as long as the prothorax, very convex, cylindrical, narrowly margined, regularly and coarsely punctate-striate from the base, without scutellar stria, the interstices convex; legs much as in *Daochus*, the external denticulation of the anterior tibiæ stronger (armed with two short and three long teeth), the teeth on the intermediate tibiæ stronger, the apices of the posterior tibiæ more produced; tarsi very sparingly clothed with hair beneath, the first joint of the posterior pair short and thin, the length of the two following joints united; epipleuræ narrow (slightly constricted in the middle), extending to the apex of the elytra; prosternum rather broad, declivous behind; metasternum long, deeply impressed longitudinally behind; intercoxal process triangular.

This genus will include a single species from the State of Panama. I have only seen two examples: these are possibly male and female, as they were taken together, though they have the head and thorax similarly formed; analogous cases are known in the allied genera.

Telchis is perhaps best placed near *Peneta*, to which, however, it is not very closely allied; it may be known at once by the very large, loosely articulated 3-jointed club of its antennæ, cylindrical form, excavated thorax, and other characters given above.

1. **Telchis clavicornis.** (Tab. VII. fig. 5 *; 5 *a*, mentum; 5 *b*, maxilla and maxillary palpus; 5 *c*, antenna.)

Elongate ovate, subcylindrical, very convex, black, shining. Head coarsely and closely, the anterior face of the transverse frontal elevation much more closely and finely, punctured; prothorax a little broader than long, narrowing a little before and behind, the angles obtuse (the anterior ones slightly prominent, but not produced), the base subtruncate, the disc broadly and very deeply excavate in the middle (the excavation open in front, and bounded anteriorly by a sinuous transverse impression, sinuous at the sides), with an elevated smooth longitudinal ridge from the centre of the excavation behind to the base, the surface very coarsely, but not very closely, punctured; elytra subparallel, narrowing a little at the extreme base, the humeri small but distinct, coarsely punctate-striate (the punctures transverse and closely placed), the interstices strongly convex, and sparingly and finely punctured; beneath shining, coarsely punctured, the metasternum and the ventral surface in the middle smoother.

Length $5\frac{1}{2}$–6 millim. (♂.)

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Two examples.

* In the figure given the thorax and elytra (especially the latter) are badly drawn; the whole insect is much more elongate, and narrower.

DIŒDUS.

Diœdus, Leconte, Class. Col. N. A. p. 338 (1862); id. New Sp. Col. p. 131 (1866); Horn, Rev. Ten. of Am. north of Mexico, p. 365; Lec. & Horn, Class. Col. N. A. p. 381.

A single species only of this genus is known; it inhabits the whole of North America, according to Dr. Horn, and is found beneath pine bark. I include it in our fauna somewhat doubtfully on the authority of a mutilated specimen captured by myself in Guatemala.

1. Diœdus punctatus?

Diœdus punctatus, Lec. loc. cit. p. 238[1]; id. New Sp. of Col. p. 131[2]; Horn, loc. cit. p. 365.

Hab. North America, Atlantic States [1], Middle and Southern States [2].—? Guatemala, Chilasco 6000 feet (*Champion*).

A single specimen (without antennæ) from Guatemala is apparently referable to this or an allied species; it differs from a type of *D. punctatus* contained in Mr. F. Bates's collection in being larger, the head not so closely and more coarsely punctured, and not so deeply sunk into the prothorax.

ARRHABÆUS.

Mentum trapeziform, deflexed at the sides, bisinuate in front, the anterior angles produced; lobes of the maxillæ armed with coarse spiny setæ; last joint of the maxillary palpi elongate ovate; ligula strongly exserted, transverse, broadly rounded in front; mandibles projecting, slightly cleft at the apex, clasping the prominent labrum (between which and the epistoma a dividing clypeus is to be seen in many specimens), subangular on the other side; antennæ short, reaching to about the middle of the prothorax, the first joint stout, the second smaller, the third short, and scarcely longer, though narrower, than the second, the fourth to the ninth transverse, and widening a little outwardly, the tenth twice the width of the ninth, transverse, and forming with the eleventh a stout, loosely articulated 2-jointed club, the eleventh twice as long as and the width of the tenth, broadly rounded at the apex; head short and broad, rather deeply sunk into the prothorax, the lateral margins of the front swollen and raised (in the male more strongly), not extending in front beyond the epistoma, nor beyond the inner upper margin of the eye behind; epistoma confounded with the front, short, concave within in the male, the anterior margin broadly truncate; eyes lateral, rounded, a little distant from the prothorax; prothorax transversely convex, the disc broadly impressed in front in both sexes, the anterior face abruptly declivous, distinctly margined; scutellum moderate; elytra a little wider than and scarcely twice as long as the prothorax, very convex, coarsely and regularly punctate-striate (the sutural stria continuing direct to the base), without scutellar stria, narrowly margined, the humeri distinct; anterior tibiæ armed on the outer edge with three or four coarse teeth, the intermediate pair similarly armed, but with the teeth finer; outer apical angles of all the tibiæ produced and dentiform, spurs strong; tarsi very sparingly clothed with hair beneath, first joint of the posterior pair the length of the two following joints united; prosternum horizontal, the apex slightly produced and broadly rounded; epipleuræ broad, extending to the apex of the elytra.

This genus includes a single species from Costa Rica and the State of Panama. *Arrhabœus* may be at once known from *Diœdus*, which also has a 2-jointed club to the antennæ, by its much more convex form, coarsely denticulated tibiæ, differently formed thorax, &c.; it cannot be confounded with any other known genus.

The single species is found in the forest-region beneath bark.

1. **Arrhabæus convexus.** (Tab. VII. fig. 6; 6 *a*, labium; 6 *b*, maxilla and maxillary palpus; 6 *c*, antenna.)

Oblong ovate, very convex, dark reddish brown or black, shining. Head coarsely and rather closely punctured, the front broadly but shallowly depressed (more deeply in the male), the lateral margins raised and swollen; prothorax broader than long, narrowing a little before and behind, the angles obtuse, widest about the middle, the base broadly but feebly emarginate, the disc broadly concave in front (more deeply in the male), very coarsely and rather closely punctured; elytra coarsely punctate-striate, the interstices convex and finely and sparingly punctured; beneath shining, the prothorax and the sides of the metasternum rather coarsely, the latter in the middle and the ventral surface much more sparingly and finely, punctured.

Length 4½-5 millim. (♂ ♀.)

Hab. Costa Rica, Irazu, Cache (*Rogers*); Panama, Volcan de Chiriqui, Bugaba (*Champion*).

Many specimens. In well-developed males of this species the lateral margins of the front are more raised; the thorax broader, more strongly transversely convex, and the disc more deeply excavate in front.

A specimen from Irazu is figured.

GNATHOCERUS.

Gnathocerus, Thunberg, Act. Holm. 1814, p. 47; Lacord. Gen. Col. v. p. 322; Horn, Rev. Ten. of Am. north of Mexico, p. 365.

This genus is now restricted to a cosmopolitan species found nearly all over the world, and the native country of which is apparently unknown.

1. **Gnathocerus cornutus*.**

Trogosita cornuta, Fabr. Ent. Syst. Suppl. p. 51.

Hab. North America.—Mexico, Orizaba, Guanajuato (*Sallé*), Jalapa (*Höge*); Guatemala (*Sallé*).—Europe &c.

An introduced species.

ECHOCERUS.

Echocerus, Horn, Rev. Ten. of Am. north of Mexico, p. 366 (1870); Lec. & Horn, Class. Col. N. A. p. 381.

This is a genus founded by Dr. Horn upon a single species introduced into the United States; it is probably a native of South America, and perhaps also of our country, from whence we now add a second species. I have retained *Echocerus* as distinct from *Gnathocerus*, but I very much doubt whether it can be maintained, the second species now described being in some respects intermediate, though agreeing best with the former.

* I have not thought it necessary to give full synonymy for this and the other introduced species which do not really belong to our fauna.

1. **Echocerus maxillosus.**

Trogosita maxillosa, Fabr. Syst. Eleuth. i. p. 155[1].

Trogosita maxillaris, Beauv. Ins. d'Afr. & Amer. p. 125, t. 32. f. 4[2].

Gnathocerus maxillosus, Lacord. Gen. Col. v. p. 322, nota[3]; Wollast. Ann. & Mag. Nat. Hist. 3rd ser. vi. p. 49 (1860)[4]; Col. Atlant. App. p. 61[5].

Echocerus maxillosus, Horn, loc. cit.[6]

Hab. North America[6].—Mexico, Guanajuato (*Sallé*); Guatemala, Paraiso (*Champion*); Nicaragua, Chontales (*Belt*).—Colombia[3]: South America[1 2 3]; Antilles[3]; Madeira[4 5]; Canary Islands.

This is another species now becoming introduced, through the medium of commerce, into various parts of the world.

2. **Echocerus analis.** (Tab. VII. fig. 7, ♂.)

Elongate ovate, subparallel, convex, black, shining. Antennæ stout, the joints from the fourth becoming strongly transverse, the last joint broad and rounded at the apex. Head rather broad, deeply sunk into the prothorax, with a few fine scattered punctures, almost smooth, shining; in the male the lateral margins of the front (antennary orbits) extended and foliaceous, reaching more than halfway across the eyes (as in *Gnathocerus*), and rounded externally (as in *Echocerus*), and the mandibles armed above with a long, suberect, sickle-shaped incurved horn (as in *Echocerus*), and the space between the eyes transversely raised (almost touching the anterior margin of the prothorax) and armed with two rounded tubercles; prothorax scarcely broader than long, the sides almost straight, scarcely narrower at the base, feebly sinuate behind, the anterior angles obtuse and rounded, the hind angles subrectangular, the base closely embracing the elytra, and with a distinct and rather deeply impressed oblique fovea on each side, the surface closely and rather coarsely punctured; elytra the width of the prothorax at the base, the sides almost parallel to beyond the middle, regularly and rather coarsely punctate-striate, the interstices closely and very finely punctured, the apical third red; epipleuræ not reaching the apex of the elytra; head in front, the mandibles, the antennæ, and legs, red; the first joint of the posterior tarsi short, about the length of the two following joints united.

Length 4 millim. (♂.)

Hab. Guatemala, San Gerónimo (*Champion*).

One example, found under bark.

SICINUS.

Form of *Echocerus*; in the male the mandibles armed above with a broad, recurved, suberect horn (broad at the base, diverging and truncate at the apex in *S. guatemalensis*, feebly converging and pointed at the apex in *S. brevipes*), the lateral margins of the front extended and foliaceous and reaching behind about halfway across the eyes, and the space between the eyes armed with two large tubercles (in the female with small rounded prominences); antennæ as in *Echocerus*, the penultimate joints strongly transverse, the apical joint short and broad, and rounded at the apex; legs short, the femora gradually narrowed to the apex (not swollen at the inner apical angle as in *Gnathocerus*); first joint of the posterior tarsi about as long as the two following joints united; epipleuræ not reaching the apex of the elytra.

I place two small species from Central America in this genus, which, as we have retained *Echocerus* as generically distinct from *Gnathocerus*, it has also become necessary to separate. One of these species was captured at light, in company with other

peculiar and rare forms of Hydradephaga and Pselaphidea never met with by me elsewhere.

The comparatively short legs and peculiar cephalic armature of the male render this genus easy of recognition.

1. **Sicinus guatemalensis.** (Tab. VII. fig. 10, ♂; 10 *a*, side view of head.)

Elongate ovate, subparallel, moderately convex, reddish ferruginous (sometimes slightly stained with piceous), shining. Head distinctly and rather closely punctured; in the male the lateral margins of the front broadly extended and foliaceous (deeply concave within), the mandibles armed on the upper side with a broad suberect horn (broad at the base, and abruptly emarginate just before the apices, which diverge and are narrowly truncate), the space between the eyes armed with two very large transverse rounded prominences; in the female more evidently punctured, the sides of the front very slightly foliaceous, and with two feeble rounded prominences between the eyes; prothorax transverse, the sides almost straight, feebly sinuate before the base, the base and apex subtruncate, the anterior angles obtuse, the hind angles subrectangular, the base with a feeble oblique fovea on each side, the surface closely and rather coarsely punctured; elytra the width of the prothorax at the base, regularly punctate-striate, the interstices closely and somewhat coarsely punctured.

Length 3 millim. (♂ ♀.)

Hab. GUATEMALA, Paraiso, El Reposo (*Champion*).

Three examples.

2. **Sicinus brevipes.**

Closely allied to *S. guatemalensis*; the mandibles in the male armed above with a recurved erect horn (broad towards the base, slightly converging and incurved at the apices, which are pointed), the lateral margins of the front extended and foliaceous (not so strongly as in *S. guatemalensis*, and more rounded), the space between the eyes armed with two very prominent transverse triangular prominences; prothorax and elytra as in *S. guatemalensis*.

Length 3 millim. (♂.)

Hab. GUATEMALA, Zapote (*Champion*).

One example.

ICCIUS.

Mentum small, trapeziform; antennæ perfoliate, the third joint short (shorter than the first and second together), the fourth about as long as the second, the fifth to the tenth gradually widening and transverse, the eleventh large, broad, ovate, rounded at the apex; apical joint of the maxillary palpi ovate, obliquely truncate at the apex; head broad, in the male the lateral margins of the front (antennary orbits) extended and more or less foliaceous (very feebly in *I. cylindricus*), the space between the eyes armed with one or two stout erect tubercles, and the mandibles armed above with a long, suberect, sickle-shaped horn; prothorax transversely convex and narrowly margined (*I. cephalotes*), or longer than broad, cylindrical, and indistinctly margined (*I. cylindricus*), without indication of basal foveæ; elytra elongate, subparallel, and regularly punctate-striate (*I. cephalotes*), or cylindrical and irregularly punctate-striate (*I. cylindricus*); epipleuræ not reaching the apex of the elytra; anterior tibiæ slightly sinuous, denticulate on their outer edge; first joint of the posterior tarsi short, about as long as the two following joints united; prosternum narrow, slightly produced at the apex; metasternum long, longitudinally canaliculate behind; intercoxal process triangular. Form elongate or cylindrical.

This genus includes two Central-American species, one of which (*I. cephalotes*) is not at all uncommon in Mexico and Guatemala. *Iccius* may be readily recognized from *Echocerus*, its nearest ally, by its elongate or cylindrical form, and the denticulate anterior tibiæ, as well as by the characters given above. Both species are found under bark.

1. **Iccius cephalotes.** (Tab. VII. fig. 8, ♂; 8 *a*, side view of head.)

Elongate ovate, subparallel, strongly convex, colour varying from dark reddish ferruginous to black, shining. Head coarsely and closely punctured, the epistoma smoother; in the male the lateral margins of the front broadly and subangularly extended and foliaceous (scarcely reaching halfway across the eyes and not projecting beyond them), the mandibles armed above with a long, erect, sickle-shaped horn, and the space between the eyes with two stout, subercct tubercles (placed close together and distant from the eyes); in the female the sides of the front slightly swollen and reflexed; prothorax broader than long, transversely convex, the angles obtuse and rounded, widest about the middle, rounded at the sides, the base subtruncate, coarsely, closely, and equally punctured; elytra long (more than twice as long as the prothorax), about as wide as the prothorax at the base, convex, subparallel to beyond the middle, regularly punctate-striate, the interstices flat and somewhat coarsely and closely punctured, the humeri obtuse, colour varying from reddish ferruginous to black, sometimes black with the base or suture reddish, sometimes reddish ferruginous with the suture broadly darker; head and prothorax beneath coarsely and closely, the metasternum and ventral segments more sparingly, punctured.

Length $3\frac{1}{2}$–4 millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Cerro Zunil, Las Mercedes, Capetillo (*Champion*).

Many specimens. Poorly developed males of this species have the horns and tubercles shorter; the foliaceous lateral margin of the head less extended, rounded, and not subangulate externally. We figure a well-developed male from Las Mercedes.

2. **Iccius cylindricus.** (Tab. VII. fig. 9, ♂; 9 *a*, side view of head.)

Very long and narrow, cylindrical, black, shining. Head very closely and rugulosely, the epistoma more sparingly, punctured, the epistoma well defined posteriorly by a deep transverse impression (in the centre of which, in the male, is a deep fovea), the lateral margins of the front swollen and feebly foliaceous (not extending so far outwardly as the eyes, and only slightly impinging on them), the mandibles armed above with a long, suberect, sickle-shaped horn, and the space between the eyes with a strong, slightly curved, suberect tubercle in the middle; prothorax cylindrical, longer than broad, very feebly margined at the sides, the base truncate, the sides almost straight, the angles obtuse, coarsely and closely punctured: elytra about twice as long, and of the same width, as the prothorax, parallel nearly to the apex, not closely embracing the prothorax, the humeri rounded, irregularly and shallowly punctate-striate, the striæ interrupted and more or less confounded with the almost equally coarsely punctured flat interstices; the three basal and the apical joints of the antennæ, the palpi, the front of the head, the mandibles and appendages, the basal half of the elytra (the suture excepted), and the legs, reddish testaceous or ferruginous.

Length 3 millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo (*Champion*).

Two examples only of this very distinct species were obtained.

TRIBOLIUM.

Tribolium, MacLeay, Annal. Jav. 1825, p. 47; Lacord. Gen. Col. v. p. 323; Horn, Rev. Ten. of Am. north of Mexico, p. 365.

A cosmopolitan genus, two or three species of which are found in almost all parts of the world. Two species are found in our country, both, doubtless, introduced. Another species (*T. madens*, Charp.) is found abundantly in North America wherever grain is stored, according to Dr. Horn; I have not seen it from our country.

1. Tribolium ferrugineum.

Trogosita ferruginea, Fabr. Spec. Ins. i. p. 324 (1781).

Hab. MEXICO, Guajuco in Nuevo Leon, San Pedro in Coahuila (*Dr. Palmer*), Oaxaca, Tuxtla (*Sallé*); GUATEMALA (*Sallé*), San Gerónimo (*Champion*); PANAMA, Volcan de Chiriqui, Caldera, David (*Champion*).—EUROPE &c.

2. Tribolium confusum.

Tribolium confusum, Jacq. Duval, Gen. Col. Eur. Cat. 1868, p. 181, nota.

Hab. MEXICO, Guajuco in Nuevo Leon, San Pedro in Coahuila (*Dr. Palmer*), Guanajuato (*Sallé*).—EUROPE; JAPAN.

ALEGORIA.

Alegoria, Castelnau, Hist. Nat. ii. p. 221 (1840); Lacordaire, Gen. Col. v. p. 325; F. Bates, Ent. Monthly Mag. ix. p. 182.
Allegoria, Gemm. & Har. Cat. vii. p. 1959.
Hylonoma, Dej. Cat. 3rd edit. p. 221.

Four species have been described of this New-World genus; others, undescribed as yet, exist in collections. In *Alegoria* the penultimate joint of the tarsi is very distinctly sub-bilobed. The different species are found beneath bark in forest districts; the genus ranging from Mexico to Parana.

1. Alegoria sallæi. (Tab. VII. fig. 11, ♂.)

Alegoria sallei, F. Bates, Ent. Monthly Mag. ix. p. 181[1].

Hab. MEXICO[1] (*coll. F. Bates*), Tehuantepec (*Sallé*).

2. Alegoria dilatata.

Alegoria dilatata, Cast. Hist. Nat. ii. p. 221 (1850)[1]; F. Bates, Ent. Monthly Mag. ix. p. 182 (foot-note).
Hylonoma sinuatocollis, Dej. Cat. 3rd edit. p. 221.

Hab. MEXICO (*coll. F. Bates*); GUATEMALA (*Mus. Stuttgart*), San Juan in Vera Paz

(*Champion*); NICARAGUA, Chontales (*Belt*); PANAMA (*coll. F. Bates*), Bugaba, David (*Champion*), Taboga Island (*J. J. Walker*).—COLOMBIA, Bogota; GUIANA, Cayenne[1]; BRAZIL; PERU.

A widely-distributed species.

PHERES.

Mentum transversely oval, pilose in the male; ligula emarginate in front; maxillary palpi stout, the last joint securiform; maxillæ coarsely setose, the inner lobe armed at the apex with a distinct tooth; labrum prominent; antennæ perfoliate, long (almost reaching to the base of the prothorax), the third joint not quite twice the length of the second, the third to the sixth ovate and shortening a little in length, widening outwardly from the seventh joint, the ninth and tenth broader than long, the eleventh large (nearly twice as long as the tenth) and rounded at the apex; head not very deeply sunk into the prothorax; epistoma short, broadly but feebly rounded in front in a line with the lateral margins, which are not swollen; eyes strongly transverse, large but not convex, narrowed to half their width at the sides by the extension of the lateral margins of the front; prothorax a little broader than long, rounded at the sides, broadly emarginate at the base and apex, narrowly margined; scutellum broadly subtriangular; elytra convex, wider than and not closely embracing the prothorax, very narrowly margined, not quite twice as long as the prothorax, regularly punctate-striate, with a short scutellar stria, the humeri rounded and obsolete; anterior tarsi slightly dilated in the male, all the tarsi beneath (and the inner sides of the tibiæ, especially the two front pairs in the male, towards their apices) somewhat thickly clothed with long fulvous hairs; anterior tibiæ in the male slightly sinuous, the inner side broadly but feebly expanded triangularly before the middle, and armed on the lower side a little distance before the apex with a strong blunt tooth (not visible from above); intermediate tibiæ in the male inwardly curved, slightly swollen in the middle on the inner side, and the inner apical angle obliquely produced; tibial spurs strong; first joint of the posterior tarsi long, longer than the two following joints united; epipleuræ narrowing at about the last ventral segment, thence very narrowly extending to the apex of the elytra; prosternum declivous behind, the apex not produced, margined within; intercoxal process broad, rounded in front.

The above characters, taken principally from unpublished notes of Mr. F. Bates, includes one species from our country, and probably also one or two other undescribed species from Guiana and Peru.

Pheres is nearest allied to *Eutochia* (*Aniara*, Lac.), two species of which have been described from North America, but differing in general form (the thorax being rounded at the sides, and narrower than the elytra, the elytra rounded at the shoulders and not closely embracing the thorax), structure of the mentum (which is formed much as in many species of *Uloma*, and pilose in the male), anterior tibiæ in the male, &c.

1. **Pheres batesi.** (Tab. VII. fig. 12, ♂; 12 *a*, labium, ♂; 12 *b*, labium, ♀; 12 *c*, maxilla and maxillary palpus.)

Oblong ovate, convex, piceous black, shining. Head closely and rather coarsely punctured; prothorax rather broader than long, moderately convex, rounded at the sides, broadly emarginate at the base and apex, widest about the middle, the sides broadly but feebly sinuate before the base, the anterior angles prominent but obtuse, the hind angles subrectangular, scarcely broader at the base than at the apex, the surface equally, moderately coarsely, and not very closely punctured, the base with a short, shallow, obsolete oblique fovea on each side; elytra strongly convex, feebly rounded at the sides, widest about the middle, regularly and not very coarsely punctate-striate (the punctures placed close together), the interstices slightly convex and very finely and sparingly punctured; beneath shining, the ventral surface diffusely and rather coarsely punc-

tured, and with numerous coarse longitudinal wrinkles at the sides; anterior and intermediate tibiæ (in some specimens) very feebly serrate on their outer edge.

Length 7–7½ millim. (♂ ♀.)

Hab. PANAMA (*coll. F. Bates*).

Numerous examples.

ULEDA.

Uleda, Castelnau, Hist. Nat. ii. p. 220.

Mentum large, coarsely punctured, transversely oval, the sides produced laterally, pilose in the male, glabrous in the female; ligula prominent, the anterior angles rounded, triangularly emarginate in front; palpi stout, the last joint of the maxillary pair securiform; inner lobe of the maxillæ toothed at the apex; labrum prominent, coarsely setose, separated from the epistoma by a more or less distinct membranous space; antennæ stout, perfoliate, setose, widening outwards, rather short, not reaching to the base of the prothorax, the third joint scarcely longer though narrower than the fourth, the seventh to the tenth transverse, the eleventh almost twice as long as and rather broader than the tenth, and bluntly rounded at the apex; head short, broad, somewhat deflexed, deeply sunk into the prothorax; epistoma short, distinctly defined posteriorly by a transverse impressed line, broadly but feebly emarginate in front; lateral margins of the front but little swollen; eyes rather large, convex, strongly transverse; prothorax much broader than long, narrowing anteriorly, the lateral margins distinctly swollen and reflexed, the base strongly bisinuate and not margined; scutellum large, scutiform; elytra broad, a little broader than, and closely embracing, the prothorax, widest behind the middle, narrowly margined, the humeri rounded, regularly and deeply punctate-striate, sometimes with a scutellar stria; tibiæ dilated outwardly, the two front pairs finely denticulated on their outer edge, in the male the anterior pair inwardly curved, and the inner apical angle broadly and obliquely produced and covered with short fulvous hairs, and the intermediate ones also slightly produced at their inner apical angle (in *U. diaperoides* &c. the outer half broadly expanded), spurs strong; tarsi stout, thickly clothed (the inner sides also of all the tibiæ towards their apices, sparingly) with long fulvous hairs beneath, the first joint of the posterior pair long, as long as the apical joint; epipleuræ broad, abruptly terminating some distance before the apex of the elytra; prosternum deflexed behind, the apex slightly produced; mesosternum short; intercoxal process broad, slightly rounded in front; form convex, broad oval, short.

This genus contains some few species, mostly undescribed, from Tropical South America, one of which has been found in Mexico by Truqui; *Uloma* (*Uleda*) *diaperoides*, Cast., from Brazil, also belongs to it. The broad ovate, short form, and characters given above are, in my opinion, sufficient to separate this genus from *Uloma*. I adopt the name *Uleda*, used by Castelnau for a section of *Uloma* containing *U. diaperoides*. Lacordaire (Gen. Col. v. p. 333) retains this species in *Uloma*. The species here described is, however, more typical; in Mr. F. Bates's collection the genus is separated from *Uloma* and labelled *Melania*?

1. **Uleda grossa.** (Tab. VII. fig. 13, ♂; 13 *a*, labium, ♀; 13 *b*, labium, ♂; 13 *c*, maxilla and maxillary palpus.)

Broad ovate, short, convex, black, shining. Head finely and sparingly punctured; prothorax much broader than long, widest behind the middle, rounded at the sides, narrowing anteriorly, much broader at the base than in front, the angles obtuse, finely and rather closely punctured; elytra broad, slightly rounded at the sides, widest some distance behind the middle, deeply and regularly punctate-striate (the punctures placed close together), the interstices slightly convex and very finely and sparingly punctured; beneath shining, coarsely punctured along the sides, the sides and base of the ventral surface with numerous

coarse longitudinal wrinkles, the rest with scattered not very fine punctures; the two basal joints of the antennæ sometimes red.

Length 8½–10 millim. (♂ ♀.)

Hab. MEXICO (*coll. F. Bates ex Truqui*).—COLOMBIA; VENEZUELA, Caracas; GUIANA, Cayenne; BRAZIL, Bahia.

Numerous examples. Apparently a widely distributed and not uncommon species in Tropical South America; one example only from Mexico. Examples of this species contained in Mr. F. Bates's collection bear various MS. names. The example from Mexico, a male, is figured.

ANTIMACHUS.

Antimachus, Gistl, Isis, 1829, Heft x. p. 1055, t. 3. figg. A, *a*; Lacordaire, Gen. Col. v. p. 330.
Ceratupis, Perty, Del. Animal, art. Brasil, p. 57.

This is a genus containing some few Tropical American species, one of which is found in Nicaragua. The range of *Antimachus* is from Nicaragua to Brazil. An allied genus, *Metabolocerus*, F. Bates, is found in Colombia.

1. **Antimachus coriaceus.**

Antimachus coriaceus, Lac. Gen. Col. v. p. 331, nota.
Uloma coriacea, Dej. in litt.

Hab. NICARAGUA, Chontales (*Belt, Janson*).—COLOMBIA; GUIANA, Cayenne; BRAZIL.

ULOMA.

Uloma, Castelnau, Hist. Nat. ii. p. 220 (1840); Lacordaire, Gen. Col. v. p. 332.

This is perhaps the most widely distributed genus of the Tenebrionidæ, and found in almost all the warmer parts of both the Old and the New Worlds, and also in Australia; it is well represented in Central America by seven species.

Uloma will doubtless eventually have to be divided when the numerous undescribed tropical species are worked out. The different species are found beneath bark.

1. *Epipleuræ extending to the apex of the elytra.*

* *Thorax with a deep transverse excavation before the middle in the male.*

1. **Uloma mexicana.** (Tab. VII. fig. 14, ♂.)

Uloma mexicana, Dej. Cat. 3rd edit. p. 221[1].
? *Antimachus* (*Uloma*) *mexicana*, Lac. Gen. Col. v. p. 331, nota †.

† Lacordaire places this species in *Antimachus*, though he calls especial attention to the external armature of the tibiæ; possibly, however, he may have had some other insect in view.

Elongate ovate, subparallel, black, shining. Head closely and distinctly (in some specimens rugulosely) punctured, the epistoma with a deep triangular excavation (extending to the vertex) in the male, deeply transversely excavate (the excavation not passing the interocular space) and with the anterior part raised in the middle in the female; prothorax transverse, widest a little before the base, the angles obtuse, the base feebly bisinuate, distinctly, equally, and not very closely punctured, the disc with a broad and deep transverse excavation before the middle in the male, slightly flattened in the female; elytra a little wider than the prothorax at the base, parallel to beyond the middle, regularly and rather deeply punctate-striate (the punctures rounded and not very closely placed), the interstices almost impunctate and feebly convex; anterior tibiæ coarsely denticulate on their outer edge, in the male longitudinally and deeply excavate beneath, the inner edge with a large, broad, blunt tooth (deeply concave beneath) before the middle, and a thick brush of fulvous hairs from the middle to the apex; intermediate tibiæ denticulate on their outer edge, curved in the male; epipleuræ extending to the apex of the elytra; underside of all the femora sparingly fringed with fulvous hairs along each side of the groove beneath in the male.
Length 14–16½ millim. (♂ ♀.)

Hab. MEXICO[1] (*coll. F. Bates*), Cordova (*Sallé*), Jalapa (*Höge*, *Morrison*); BRITISH HONDURAS, Belize (*coll. F. Bates*), R. Sarstoon (*Blancaneaux*); GUATEMALA, Coban, Balheu, San Joaquin, Santa Barbara, San Gerónimo, Capetillo, El Tumbador (*Champion*), Aceytuno (*Salvin*); SALVADOR (*coll. Sharp*); NICARAGUA, Chontales (*Belt*, *Janson*); COSTA RICA (*Van Patten*).

A common species in Central America, though undescribed till now. We figure a well-developed male from Jalapa.

2. Uloma fossulata.

Uloma fossulata (Chevr.), Dej. Cat. 3rd edit. p. 221.[1]

Closely allied to *U. mexicana*, and differing only as follows:—Smaller, the epistoma transversely and similarly excavate, a little more deeply in the male, in both sexes (as in *U. mexicana*, ♀); the prothorax more sparingly but more coarsely punctured, the excavation in the male narrower and more regular in outline, the disc in the female sometimes slightly flattened.
Length 10–12 millim. (♂ ♀.)

Hab. MEXICO[1] (*coll. F. Bates*), Cordova (*Sallé*), Jalapa (*Höge*); BRITISH HONDURAS, R. Hondo, Belize (*Blancaneaux*); GUATEMALA, Balheu (*Champion*).

Not uncommon in Mexico, one only from each of the other localities. The difference in the structure of the epistoma in the male, the smaller size, and the coarser and more sparingly punctured thorax will readily separate this species from *U. mexicana*.

3. Uloma lævicollis.

Elongate ovate, subparallel, reddish brown or black, shining. Head closely and finely punctured, the epistoma transversely and similarly excavate in both sexes; prothorax transverse, widest a little before the base, the angles obtuse, very finely and rather closely punctured (in some specimens the punctuation is deeper and more distinct), more convex and more rounded at the sides and the disc with a broad and deep transverse excavation in the male, the disc (in some specimens) slightly flattened in the female; elytra punctate-striate, the interstices smooth or very indistinctly punctured; legs and epipleuræ as in *U. mexicana*.
Length 11½–14 millim. (♂ ♀.)

Hab. GUATEMALA (*Mus. Stuttgart*), Pantaleon, El Tumbador (*Champion*); NICARAGUA, Chontales (*coll. F. Bates*, *Janson*, *Belt*); COSTA RICA (*Van Patten*); PANAMA, Volcan de Chiriqui, Bugaba (*Champion*).

Many examples. Narrower, smaller, and more convex than *U. mexicana*; the thorax more finely and more sparingly punctured, the epistoma similarly excavate in both sexes. From *U. fossulata*, male, it may be known by its broader, smoother, and more convex thorax, the punctuation of which is finer and closer in both sexes; the antennæ stouter, the penultimate joints more transverse.

A single immature male example contained in Mr. F. Bates's collection has the antennæ still stouter, the penultimate joints even more strongly transverse; it is doubtfully distinct from *U. lævicollis*.

4. **Uloma retusa.**

Tenebrio retusus, Fabr. Syst. Eleuth. i. p. 149.
Uloma retusa, Casteln. Hist. Nat. ii. p. 220[1].

Var. **dimidiata.** (Tab. VII. fig. 15, ♂.)

Tenebrio retusus, var., Fabr. loc. cit.
Uloma dimidiata, Dej. Cat. 3rd edit. p. 221[2].

Reddish ferruginous, the elytra black to a little beyond the middle.

Hab. Mexico, Toxpam, Cordova (*Sallé*); British Honduras, Rio Sarstoon, Rio Hondo, Belize (*Blancaneaux*); Nicaragua, Chontales (*Belt*, *Janson*); Panama (*coll. F. Bates*), Bugaba (*Champion*). — Colombia; Guiana, Cayenne[1 2]; Brazil[1]; Peru; Antilles[1].

Many examples. I am unable to find any satisfactory difference, except colour, between our Central American specimens and the South American *U. retusa*, Fabr. Both forms occur in Brazil and Guiana; in all the examples I have seen from Colombia and Central America the elytra have only about the basal half black.

U. retusa may be known by its convex form, coarsely punctured thorax, coarsely and deeply punctate striate elytra, and peculiar coloration; the head, thorax, legs, and epipleuræ are formed much as in *U. fossulata*.

A male example from Chontales is figured.

** *Thorax similar (the disc without anterior excavation in the male) in both sexes.*

a. *Anterior tibiæ with a sharp triangular tooth in the male.*

5. **Uloma armata.** (Tab. VII. fig. 16, ♂.)

Elongate ovate, subparallel, dark reddish brown or black, shining. Head closely and rather finely punctured; the epistoma similarly and feebly excavate transversely in both sexes; prothorax transverse, widest a little before the base in the male, at the base in the female, the angles very obtuse (almost rounded), the base bisinuate and distinctly margined, closely and somewhat coarsely punctured, the disc with a shallow sinuous transverse impression (limited on each side by a shallow oblique fovea) just before the base, and similar (without anterior excavation in the male) in both sexes; elytra comparatively elongate, subparallel, the base emarginate, the humeral angles prominent, deeply punctate-striate, the interstices almost smooth; tibiæ rather long (longer than in *U. mexicana* and allies), the inner edge of the anterior pair in the male with a sharp triangular tooth (placed a little before the middle, and concave beneath) and lined with coarse spiny fulvous hairs from the middle to the apex; intermediate tibiæ almost smooth on

their outer edge, long and curved, and their inner apical angle produced in the male; posterior tibiæ in the male slightly sinuous and lined with longish fulvous hairs at the inner apical third; epipleuræ extending to the apex of the elytra.

Length 15–16 millim. (♂ ♀.)

Hab. British Honduras, Rio Sarstoon (*Blancaneaux*); Guatemala, Coban (*Champion*).

Three examples. A male example from Coban is figured.

b. *Anterior tibiæ with a blunt triangular tooth in the middle and a strong recurved tooth before the apex, and the posterior tibiæ also toothed, in the male.*

6. **Uloma spinipes.** (Tab. VII. fig. 17, ♂.)

Elongate ovate, convex, subparallel, reddish brown, shining. Head closely and distinctly punctured, the epistoma transversely, but not deeply, excavate; prothorax about as long as broad, widest in the middle, the sides feebly sinuate before the base, the lateral margins distinctly reflexed, the angles obtuse and almost rounded, the base strongly bisinuate and feebly margined, the disc with a shallow sinuous transverse impression before the base, exceedingly finely and closely punctured; elytra scarcely wider than the prothorax at the base, the humeral angles prominent and concave within (into which the hind angles of the prothorax are received), deeply punctate-striate, the interstices sparingly and finely punctured and feebly convex; legs stout; anterior tibiæ sinuous, widening towards the apex, the outer edge closely and finely denticulate, in the male the inner edge with a broad, blunt, triangular tooth about the middle, beyond which deeply and semicircularly emarginate, a strong blunt tooth (directed backwards) just before the apex, and a brush of fulvous hairs (also, but smaller, in the female) at the apex itself; intermediate tibiæ sinuous, finely denticulate on their outer edge, in the male the inner edge armed with an indistinct tooth before the middle, and another near the apex, and some fulvous hairs at the apex itself; posterior tibiæ in the male slightly sinuous, the inner edge armed with a short sharp tooth near the base; tibial spurs long and sharp; prosternum horizontal, the apex a little produced and swollen; epipleuræ narrowly extending to the apex of the elytra.

Length 12–13 millim. (♂ ♀.)

Hab. Guatemala (*mus. Stuttgart*), Volcan de Fuego, 6400 feet (*Salvin*).

Five examples. A very distinct species.

2. *Epipleuræ not extending to the apex of the elytra.*

7. **Uloma divergens.** (Tab. VII. fig. 18, ♂.)

Oblong ovate, rather broad, moderately convex, reddish brown or black, shining. Head closely and almost rugulosely punctured, the epistoma transversely excavate in both sexes; prothorax a little broader than long, widest about the middle in the male, a little before the base in the female, narrowing anteriorly, the angles obtuse, closely and finely punctured, similar (without anterior excavation in the male) in both sexes; elytra comparatively short (not twice the length of the prothorax), slightly rounded at the sides, the base feebly emarginate, the humeral angles prominent, shallowly punctate-striate, the interstices very finely and sparingly punctured; legs thin; anterior tibiæ slightly curved, widening but little towards the apex, and unarmed on the inner side in both sexes; intermediate tibiæ feebly denticulate on their outer edge in the male, long and thin, curved and sinuate, distinctly swollen in the middle on the inner side, and the inner apical angle produced into a strong tooth; posterior tibiæ in the male long and thin, slightly curved, feebly swollen in the middle, and the inner apical angle produced; epipleuræ broad, not reaching the apex of the elytra.

Length 11½–12½ millim. (♂ ♀.)

Hab. Guatemala, near the city (*Salvin*), Purula 4000 feet, Totonicapam 8500 to 10,000 feet (*Champion*).

Six examples. This species may be known at once by its short broad form, the epipleuræ not reaching the apex of the elytra, the long and thin tibiæ, and male characters; it is probably generically distinct from *Uloma*.

I found this species under the bark of pines, at a great elevation at Totonicapam, also singly at Purula. A well-developed male from Guatemala city is figured.

CYNÆUS.

Cynæus, Leconte, Class. Col. N. A. p. 233; Horn, Rev. Ten. of Am. north of Mexico, p. 369.

Two species are known of this genus, both from Southern California; we now add a third species from our northern boundary.

1. Cynæus opacus.

Elongate ovate, depressed, dull ferruginous, not shining. Head very closely and finely punctured; prothorax transverse, widest about the middle, about equally narrowing at base and apex, the apex broadly but not deeply emarginate, the base very feebly bisinuate, subtruncate, the surface rather coarsely and somewhat closely punctured; elytra a little wider than the prothorax at the base, regularly punctate-striate, the punctures rounded and not very closely placed, the interstices feebly convex and very closely and finely punctured.

Length $5\frac{1}{2}$–$6\frac{1}{4}$ millim.

Hab. Mexico, Northern Sonora (*Morrison*).

Many examples received from the late Mr. Morrison as *Aphanotus brevicornis*. A dull, depressed species, with the entire upper surface very closely punctured. Flatter and duller than *C. angustus*, the elytral striæ more regularly impressed, the interstices feebly convex, the thorax less emarginate in front, the upper surface more closely punctured; also allied, but more distantly, to *C. depressus*, but, judging from the description of that species, quite distinct.

ALPHITOBIUS.

Alphitobius, Stephens, Ill. Brit. v. p. 11 (1832).

A cosmopolitan genus consisting of a few species, at the expense of which numerous others have been described.

1. Alphitobius diaperinus.

Tenebrio diaperinus, Panz. Fn. Ins. Germ. xxxvii. p. 16 (1797).

Hab. Mexico (*coll. F. Bates*), Puebla, Vera Cruz, Guanajuato (*Sallé*).—Europe; North America, &c.

2. Alphitobius piceus.

Helops piceus, Oliv. Ent. iii. 58, p. 17, t. 2. figg. 13 *a*, *b* (1795).

Hab. Mexico, Yucatan (*coll. F. Bates*), Guajuco in Nuevo Leon, San Pedro in Coa-

huila, Minas Viejas (*Dr. Palmer*), Cosamaloapam, Vera Cruz (*Sallé*); COSTA RICA (*Rogers*); PANAMA, near the city (*Champion*).—EUROPE; NORTH AMERICA, &c.

I met with this cosmopolitan species on the beach at Panama amongst old bones thrown out from the slaughter-houses, and in company with *Necrobia rufipes*.

DOLIEMA.

Doliema, Pascoe, Journ. Ent. i. p. 50 (1860); F. Bates, Ent. Monthly Mag. ix. p. 98.
Adelina, Leconte, Ann. Lyc. New York, v. p. 149 (nec Wollaston).
Sitophagus, Horn, Rev. Ten. of Am. north of Mexico, p. 346 (nec Mulsant).
Schedarosus, Reitter in litt.

Mr. Pascoe described this remarkable genus upon examples from "Batchian, Ceylon, and Manila." There cannot, however, be the slightest doubt, speaking from my own personal observation, that the genus is indigenous in Tropical America, at least two species being abundant in our country in many localities quite away from civilization. In the British Museum collection there are additional examples of both sexes of the species (*D. platisoides*) described by Mr. Pascoe, from Java, as well as from the localities quoted. I cannot help thinking, however, that *Doliema* is a native of the New World, and that it must have been introduced in some way through the medium of commerce, many species of Tenebrionidæ having been thus transmitted to various parts of the world. In America the genus ranges from the Middle United States to the Amazons valley.

The different species, of which some five or six (all testaceous in colour and closely allied) are now known, superficially resemble the Cucujidæ, owing to their very depressed or flattened form. They are found beneath bark, both in the forest region and in the more open parts of the country, one (*D. plana*) being very abundant. Mr. Pascoe (*loc. cit.*) omits to mention the peculiar armature of the head of the male, the most important specific character.

One new species from Guatemala differs from the others in wanting the sublateral carina to the elytra, and also in being very feebly convex instead of flattened; in other respects, however, it agrees.

* *Upper surface plane; the elytra with sublateral carina.*

1. Doliema plana.

? *Cucujus planus*, Fabr. Syst. Eleuth. ii. p. 94 †[1].
Adelina plana, Dej. Cat. 3rd edit. p. 340[2]; Lec. Ann. Lyc. New York, v. p. 149[3]; Class. Col. N. A. p. 238[4]; Jacq. Duval in Sagra's Hist. de Cuba (Spanish edition), vii. p. 64[5].

† This species has not been identified by modern writers; there can be little doubt that it represents either our common *D. plana* or another species of the same genus. The following is the description:—"*C.* planus, testaceus, thorace punctis duobus baseos impressis. Corpus parvum, planum, testaceum, immaculatum. Thorax punctis duobus baseos impressis. Elytra vix striata.—Habitat in America meridionali."

Sitophagus lecontei, Horn, Rev. Ten. of Am. north of Mexico, p. 346, t. 14. f. 20, ♂ [6].
? *Sitophagus planus*, Gemm. & Har. Cat. vii. p. 1987.
Schedarosus scidarius, Reitter in litt.

Hab. North America, Colorado [3] desert [4 6], Owen's valley [6], Arizona [6].—Mexico (*coll. F. Bates, Oberthür, Brit. Mus.*), Vera Cruz, Teapa (*Sallé*), Jalapa (*Höge*); British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala, Yzabal (*Sallé*), near the city, Zapote, Capetillo, Chacoj (*Champion*); Nicaragua, Chontales (*Janson*), R. Roman on the Mosquito coast (*coll. Oberthür*); Panama, Volcan de Chiriqui, Bugaba (*Champion*), Matachin (*Thième, coll. Oberthür*).—South America [1]; Colombia, Ambalema; Guiana, Cayenne [2]; Chili (*coll. Brit. Mus.*); Antilles, Cuba [5] (*coll. Brit. Mus.*).

An abundant species throughout our country, extending northwards into Colorado and Arizona, and southwards into South America.

In the long series of about 130 examples of both sexes before me, I find that the elytra vary a little in length, and also slightly, according to maturity, in the intensity of the punctuation; well developed males (one of which is figured by Dr. Horn, *loc. cit.*) may, however, always be known, as pointed out by Dr. Horn, by the broad angular horizontal extension of the sides of the head, concealing a small and short horn beneath in front; poorly developed males have the sides of the head formed very much as in *D. cucujiformis*, but have the antennary orbits much less extended laterally and almost rounded externally, and the tubercle beneath almost obsolete; the thorax in both sexes is only slightly constricted behind the middle, and, as in the other species, the disc in some examples appears to be broadly flattened and feebly concave.

This is the smallest species of the genus.

D. plana is sometimes to be seen in collections labelled *D. furcata*, and under other MS. names.

2. **Doliema cucujiformis.**

Schedarosus cucujiformis, Reitter in litt.

Longer and larger than *D. plana*; the head broader and more coarsely punctured; the antennary orbits more swollen in the female, in the male broadly and angularly produced (but only slightly) on each side in front (extending but little beyond the epistoma, which in this sex is deeply transversely impressed on each side in front), beneath which is a short tubercle; the prothorax rather more convex anteriorly, more constricted behind, more evidently punctured, the hind angles usually sharper and more prominent; the elytra comparatively longer, more evidently punctate-striate, the interstices more distinctly punctured.

Length $4\frac{1}{2}$–$5\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Cordova, Jacale (*Sallé*), Jalapa (*Höge*); Guatemala, near the city, Capetillo, Zapote, San Gerónimo (*Champion*); Nicaragua, Chontales (*Janson*).—Colombia (*coll. Brit. Mus.*), Manizales (*coll. Oberthür*).

Numerous examples. Also a common species in our country, and often found in company with *D. plana*. *D. cucujiformis* is very closely allied to *D. platisoides*, Pascoe, the type of which (a female), kindly lent me for examination by the describer, only

differs from the same sex of *D. cucujiformis* in having the thorax relatively broader; the male, however, of which there are several examples contained in the National Collection, has the epistoma angularly produced on each side in front, and also the antennary orbits (the latter not extending so far forward as the epistoma), thus differing from the same sex of *D. cucujiformis*.

In a long series of examples I find that the thorax and elytra vary somewhat in width; the thorax, however, is more constricted behind than in *D. plana*. *D.* (*Pytho*) *pallida*, Say, a species found in the Middle and Southern States of North America, is also closely allied to this species; but, judging from a female example of that species (from Louisiana) in the National Collection, and the vague description of the male, distinct.

3. **Doliema frontalis.** (Tab. VII. fig. 24, ♂.)

Form of *D. plana*. Antennæ with the first joint long and much swollen outwardly (the basal fourth thin), the second joint short, the third scarcely twice the length of the second, the fourth to the tenth long and ovate, the eleventh distinctly longer than the tenth, and somewhat pointed at the apex; head very broad, the antennary orbits swollen and extending laterally as far as the eyes, and broadly but narrowly foliaceous anteriorly, enclosing a deep groove along the whole of the front (continued as a deep transverse groove across the epistoma, which does not extend beyond the foliaceous margin, the latter rather broadly emarginate in the middle), finely and sparingly punctured; eyes large, rounded, widely separated; prothorax very broad and transverse, constricted from the middle to the base, broadest anteriorly (if anything, as broad as or rather broader here than the elytra), broadly emarginate at the base and apex, the anterior angles rounded, the hind angles subrectangular, the disc longitudinally impressed, the base with a deep longitudinal fovea on each side, the surface very finely and sparingly punctured; elytra with the base broadly and somewhat obliquely emarginate on each side (for the reception of the hind angles of the prothorax), shallowly punctate-striate, the interstices exceedingly finely and irregularly wrinkled or punctured.

Length 5 millim. (♂.)

Hab. British Honduras, R. Hondo (*Blancaneaux*).—Amazons, Para and Santarem (*coll. Brit. Mus.*).

Four male examples, two from British Honduras and one from each of the other localities.

This species may be at once known by the remarkable structure of the head in the male. There is also in the British Museum Collection a single female of a species from the Amazons possibly referable to it.

** *Upper surface feebly convex; the elytra without sublateral carina.*

4. **Doliema angustata.** (Tab. VII. fig. 25, ♂.)

Elongate, narrow, parallel, very feebly convex, brownish testaceous, shining. Head closely and finely punctured, the epistoma broadly and deeply emarginate in both sexes; in the male the antennary orbits swollen, angularly produced on each side in front (in well-developed examples also angularly produced within), the apices slightly converging, attenuate, and deflexed, and the epistoma deeply and semicircularly excavate (its front face appearing abruptly declivous); in the female deeply impressed transversely in front, the orbits swollen; antennæ comparatively short, only slightly longer in the male, the seventh to the tenth joints transverse, the eleventh joint oval and bluntly rounded at the apex; prothorax strongly transverse, subtruncate at the base, very feebly emarginate at the apex, rounded at the sides, very

slightly constricted just before the base (the hind angles in consequence somewhat distinct and subrect-angular), the anterior angles rounded, the basal foveæ very shallow, the surface finely but not very closely punctured; elytra regularly and distinctly punctate-striate, the interstices finely punctured, without sublateral carina; beneath finely and sparingly punctured; meso- and metasternum longitudinally excavate in their basal halves.

Length $3\frac{1}{2}$–4 millim. (♂ ♀.)

Hab. GUATEMALA, Las Mercedes, Cerro Zunil (*Champion*).

Four examples. This species, though not possessing the flattened form and sublateral carina to the elytra characteristic of the other species, agrees in general structure with *Doliema*, and I place it accordingly in that genus. Compared with the other species, the legs are rather shorter, and the antennæ of the male are scarcely longer than those of the female. The angular extension of the sides of the head varies a little, according to development, in the male; there is no tooth beneath.

SITOPHAGUS.

Sitophagus, Mulsant, Hist. Nat. Col. de France, Latigènes, p. 264 (1854); Ann. des Sci. phys. et nat. d'Agric. de Lyon, sér. 3, iii. p. 204; Lacordaire, Gen. Col. v. p. 387; Jacq. Duval, Gen. Col. d'Europe, iii. p. 306 (nec Horn).

Adelina, Wollaston, Ann. & Mag. Nat. Hist. ser. 3, ii. p. 413 (1858); Col. Atlant. App. p. 61 (nec Leconte).

This genus was described by Mulsant for the reception of a single male example (figured in Jacq. Duval, *op. cit.*) of an introduced insect captured at Marseilles. Four years later Wollaston, probably overlooking Mulsant's description, again described the genus under another name, *Adelina*, upon examples introduced into Madeira in a cask of bad flour. The latter author suspected the specimens were of American origin; a comparison of a common Central-American species with Wollaston's type in the British Museum Collection proves the correctness of this surmise and of the identity of the two insects. To increase the confusion, the genus has not been properly identified by American coleopterists—Leconte referring two species of a then undescribed and different genus (*Doliema*) to it; Horn (Rev. Ten. of Am. north of Mexico, p. 346), later on, adopting *Sitophagus* for the same species. Again, Reitter (Mitt. des München. Ent. Ver. i. pp. 8–10) has described three species of this genus: *S. castaneus* from Mexico—this we now know to be identical with our common species; *S. cavifrons* (the type of which has been kindly lent me by M. René Oberthür), from Venezuela, belongs to another genus; and *S. turcicus*, from the Balkans, also probably not referable to the genus.

We have now to record four species from Central America, all of which are found beneath bark, more especially in the forest-region. At least one species of this genus, though originally of subcortical habits, seems to have acquired a taste for meal, parallel cases to which are well known in this group of Tenebrionidæ. *S. cynæoides* is included with some doubt, it may possibly form the type of a new genus.

1. Sitophagus hololeptoides.

Uloma (*Ulosonia*) *hololeptoides*, Cast. Hist. Nat. ii. p. 220[1].
Sitophagus solieri, Muls. loc. cit.[2]; Lacord. loc. cit.[3]; Jacq. Duval, loc. cit. p. 306, t. 75. fig. 372 ♂[4]; F. Bates, Ent. Monthly Mag. ix. p. 99.
Hypogena hololeptoides, Jacq. Duval, in Sagra's Hist. de Cuba (Spanish edition), p. 63[5].
Adelina farinaria, Woll. loc. cit. p. 414[6]; loc. cit. p. 61[7].
Hypogena complanata, Dej. Cat. 3rd edit. p. 220; Lacord. Gen. Col. v. p. 336, nota.
Ulosonia hololeptoides, Lacord. loc. cit. p. 337, nota[8]; Gemm. & Har. Cat. vii. p. 1964.
Sitophagus castaneus, Reitter, Mitt. des Münch. Ent. Ver. i. p. 9 (1877)[9].
? *Hypogena corniyera*, Dej. Cat. loc. cit. p. 220.

Hab. MEXICO[9] (*coll. F. Bates, Oberthür*), Yucatan (*coll. Pascoe*), Ventanas (*Forrer*), Playa Vicente, Capulalpam, Vera Cruz, Cordova, Tuxtla (*Sallé*), Mirador, Esperanza, Jalapa (*Höge*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, near the city, Capetillo, Zapote, El Tumbador, San Gerónimo, Tamahu, Senahu (*Champion*); NICARAGUA, Chontales (*Janson*), Chinandega (*Sallé*); COSTA RICA, Cache (*Rogers*); PANAMA, Volcan de Chiriqui (*Champion*).—ANTILLES[1], Cuba[5]; ? GUIANA, Cayenne[8]; ? BRAZIL[8].

There cannot, I think, be much doubt that the synonymy given above is correct, and that the insects described under the above names represent one and the same species. The insects introduced into France[2 3 4] and Madeira[6 7], and described by Mulsant and Wollaston, are certainly identical with our common species. Castelnau describes his species as "allongé," and gives the length as $1\frac{1}{2}$ lin., but from the width given ($1\frac{1}{8}$ lin.) this is probably a misprint for $2\frac{1}{2}$ lin., the size of small examples of our species.

Typical examples of *S. castaneus*, from Reitter's own collection, kindly lent me for examination by M. Réné Oberthür, agree perfectly with the present species, which thus appears to have been described over and over again by different authors. *S. hololeptoides* is common throughout our country, and there cannot be the slightest doubt that it is indigenous there. Lacordaire gives Cayenne[8] and Brazil[8] as localities, possibly in error; I have not seen it from south of Panama.

Undeveloped males of this species have only the sides of the front of the head strongly raised and reflexed (the epistoma appearing abruptly and deeply emarginate), and not produced into recurved converging horns.

S. hololeptoides may be readily known by its broad and depressed form and the peculiar cephalic armature of the male; the broad epipleuræ terminate abruptly a little beyond the last ventral suture; the upper surface is shining and castaneous in colour; the intermediate coxal cavities are slightly open externally, but the trochantin is only slightly visible.

2. Sitophagus fuliginosus. (Tab. VIII. fig. 1, ♂.)

Oblong ovate, subparallel, moderately convex, black, shining. Head closely and somewhat coarsely punctured; in the male the epistoma broadly, abruptly, and deeply emarginate (the base of the emargination truncate) and shallowly impressed transversely, and the antennary orbits swollen and raised and produced anteriorly

into a long, broad, obtuse horn (as in *S. hololeptoides*); prothorax transverse, rounded at the sides, widest about the middle, very slightly narrowing from the middle to the base, the base bisinuate, the anterior angles obtuse, the hind angles subrectangular, rather convex, the basal foveæ deeply impressed, the disc shallowly impressed longitudinally in the basal half, the surface a little more sparingly and rather less coarsely punctured than the head; elytra long, subparallel, the width of the prothorax at the base, regularly punctate-striate, the interstices very feebly convex outwardly and finely and sparingly punctured; epipleuræ abruptly ending near the last ventral suture.

Length 6 millim. (♂.)

Hab. GUATEMALA, Capetillo (*Champion*).

One example. Narrower and more convex than *S. hololeptoides*; the thorax more closely and rather more coarsely punctured, the basal foveæ deeper, the sides more distinctly margined; the elytra narrower and more parallel, more narrowly margined, the interstices feebly convex outwardly. In the male the antennary orbits are formed as in *S. hololeptoides*, but the epistoma is only shallowly and broadly impressed transversely before the eyes (not deeply as in that species); the antennæ are only of the length of, and formed much the same as (though less angular at their inner apices), those of the female of *S. hololeptoides*.

3. **Sitophagus dilatifrons.** (Tab. VII. fig. 22, ♂.)

Oblong ovate, moderately convex, dark reddish brown or black, slightly shining. Head in the male with the antennary orbits broadly extended anteriorly and foliaceous (deeply concave within, abruptly truncate in front, and divided in the middle by a broad and deep triangular emargination), almost smooth and shining with a large V-shaped impression extending from the vertex forwards; in the female the orbits are slightly swollen, the epistoma broadly and shallowly impressed transversely behind, deeply impressed on each side before the eyes (thus appearing convex in the middle anteriorly), and truncate in front, the surface closely and rather coarsely punctured (the epistoma smoother); antennæ but little longer in the male, the third joint long, the fourth to the tenth triangular and decreasing a little in length, the eleventh broad and bluntly rounded at the apex; prothorax transverse, rather convex, rounded at the sides, narrowing a little anteriorly in the female, broader and more convex anteriorly and more strongly rounded at the sides in the male, the hind angles subrectangular, the base bisinuate, the basal foveæ shallow, the surface closely and comparatively coarsely punctured; elytra the width of the prothorax at the base, regularly and deeply punctate-striate, the interstices very distinctly and not very finely punctured; femora and tibiæ finely asperate; epipleuræ abruptly ending near the last ventral suture.

Length 6-7 millim. (♂ ♀.)

Hab. GUATEMALA, El Tumbador, El Reposo, Pantaleon (*Champion*).

Four examples. Comparatively shorter in form and duller than *S. fuliginosus*; the male to be known at once by the characters given above. In this species the femora and tibiæ are not so smooth as in *S. hololeptoides* and *S. fuliginosus*, and the outer edges of the latter appear to be very finely serrate.

4. **Sitophagus (?) cynæoides.** (Tab. VIII. fig. 2.)

Oblong ovate, moderately convex, subparallel; dull ferruginous, the front of the head, the disc of the prothorax, the suture, and the reflexed margins of the elytra rufous; antennæ about reaching to the base of the prothorax, widening gradually, the second joint very short, the ninth and tenth joints subtransverse; head unarmed in both sexes, the epistoma emarginate in front, well defined posteriorly by a transverse impressed line, the intraocular space feebly swollen transversely, the antennary orbits slightly swollen,

closely and not very finely punctured; prothorax transverse, the sides almost straight from the middle to the base, strongly narrowing anteriorly, the base feebly bisinuate, subtruncate, and with a shallow longitudinal fovea on each side, the apex deeply arcuate emarginate, the anterior angles prominent, obtuse, the hind angles subrectangular, the disc sometimes shallowly impressed transversely before the base, the surface closely, finely, and equally punctured (a little more finely and more diffusely than the head); elytra long, about three times the length of the prothorax, regularly punctate-striate (the punctures shallow, not coarse, and closely placed), the interstices feebly convex towards the sides and apex, finely and sparingly punctured; beneath shining, sparingly punctured: intermediate coxal cavities slightly open externally, the trochantin barely visible.

Length 6–7 millim.

Hab. Mexico, without locality (*Höge*).

Numerous examples. This species agrees so nearly with *Sitophagus* in its principal characters that I venture to place it in that genus; the head, however, is unarmed in both sexes, and, owing to the deep emargination of the front of the thorax, appears less deeply inserted; the epistoma is emarginate in front; the antennæ are formed much as in *S. fuliginosus*, but with the second joint shorter and the outer joints broader and more transverse. In general form somewhat resembling *Cynæus*, but with differently formed antennæ, broadly margined elytra, longer legs, and slightly gaping intermediate coxal cavities (as in *Sitophagus*); the head is formed much as in *Cynæus*.

ULOSONIA.

Ulosonia, Castelnau, Hist. Nat. ii. p. 220 (1840); Lacordaire, Gen. Col. v. p. 336; Lecoute, Class. Col. N. A. p. 233; Horn. Rev. Ten. of Am. north of Mexico, p. 366; Lec. & Horn, Class. Col. N. A. p. 381.

Hypogena, Dej. Cat. 3rd edit. p. 220.

The name *Ulosonia* was originally used by Castelnau for a section of the genus *Uloma* containing two Tropical American species, *U. hololeptoides* and *U. tricornis*. Lacordaire (*loc. cit.*) fully describes the genus, making it include *U. bi-impressa* (from Colombia) and *U. hololeptoides*, this author omitting all reference to *U. tricornis*. *Ulosonia* is retained here solely for *U. bi-impressa*, *U. tricornis*, and allies, numerou in species in Tropical America; *U. hololeptoides* will be the type of the genus *Sitophagus*.

The different species are found beneath bark in the humid forest regions of Tropical America, more especially in the "tierra caliente;" we now have to record six species from our country, one of which is found just on our northern boundary, the genus ranging from the Colorado desert to the Amazons valley.

1. Ulosonia tricornis.

Uloma (*Ulosonia*) *tricornis*, Cast. Hist. Nat. ii. p. 220[1].

Hypogena tricornis, Jacq. Duval in Sagra's Hist. Cuba, p. 63, t. 8. fig. 16 (Spanish edit., 1856), and p. 148, t. 8. fig. 16 (French edit., 1857)[2]; Dej. Cat. 3rd edit. p. 220.

Hab. Mexico (*coll. F. Bates*), Yucatan (*coll. Oberthür*), Tehuantepec, Playa Vicente,

Cordova, Tuxtla (*Sallé*), Esperanza, Jalapa (*Höge*); British Honduras, Belize, R. Hondo, R. Sarstoon (*Blancaneaux*); Guatemala, Chinautla (*Salvin*), Capetillo, Cerro Zunil, Las Mercedes, Zapote, El Tumbador, San Gerónimo, Cubilguitz (*Champion*), Yzabal (*Sallé*). —Antilles [1], Cuba [2].

A common species in Mexico and Guatemala. Smaller, narrower, and more parallel than *U. bi-impressa*; the thorax broader in front, invariably with numerous additional scattered very coarse punctures upon the disc; the under surface smoother (the flanks of the thorax especially) and more shining. Well-developed males have three long thin porrect horns upon the head: in the long series of upwards of one hundred specimens before me every degree of development from acute tubercles to long horns is to be found; the frontal horn in this species is always as long as the hinder ones. This species also varies very considerably in size.

A small undeveloped male from Jalapa differs from the other specimens in having the thorax punctured as in *U. depressa* and the striæ of the elytra more shallowly and finely punctate-striate; it is doubtfully referred to this species.

2. Ulosonia canaliculata.

Form of *U. tricornis*; the male cephalic armature as in poorly developed specimens of that species, and differing as follows:—The prothorax smoother, the surface with exceedingly minute scattered punctures, the large coarse punctures almost entirely obsolete (rarely with at most two or three impressions on the disc), the disc with a short deep longitudinal groove at the base and (in one specimen) longitudinally depressed from the middle to the base; the striæ of the elytra rather deeper, and the punctures more distant one from another, the interstices more sparingly punctured; the margins of the prothorax and elytra more strongly thickened and reflexed.

Length 9–10 millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*coll. F. Bates, Belt*); Costa Rica, Cache (*Rogers*); Panama, Volcán de Chiriqui (*Champion*).

Eight examples. From *U. bi-impressa*, ♀, this species may be known by its narrower form, the smoother head, the elevation on each side of the intraocular space stronger and extending transversely inwards (as in *U. tricornis* and *U. depressa*), smoother thorax, &c

Allied undescribed forms are found in Brazil.

3. Ulosonia depressa.

Form of *U. tricornis*, and the male cephalic armature as in that species; differing as follows:—Colour dark reddish brown, flatter and more depressed, the surface of the prothorax more distinctly punctured and with numerous irregularly scattered much coarser shallow impressions (not so coarse as in *U. tricornis*, nor placed principally on the disc), the elytral striæ more shallowly impressed and the punctures shallower and closer together, the interstices flat and finely and rather closely punctured, the expanded lateral margins of the prothorax and elytra rather thinner and more prominent, the under surface very sparingly punctured and almost smooth.

Length 7½–9 millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Cuernavaca (*Sallé*).

Six examples. Though this species is very near *U. tricornis* it appears to me to be sufficiently distinct.

4. **Ulosonia dejeani.** (Tab. VII. fig. 19, ♂ *.)

Hypogena triceros, Dej. in litt.

Elongate ovate, depressed, subparallel, dark reddish brown or black, shining. Head closely and distinctly punctured, armed in the male with a strong broad horn (curving upwards, concave within, and truncate at the apex) in front, and a longish curved horn (directed forwards) on each side of the intraocular space (starting from immediately above the eyes), the intraocular space narrowly raised and swollen on each side (impinging on the inner margin of the eyes) and rugulosely punctured in the female; prothorax transverse, almost as broad in front as at the base, and the sides straight from the middle to the base in the male, a little narrowed anteriorly and the sides slightly rounded in the female, very narrowly margined at the sides, the base with a short oblique fovea on each side about the middle, the disc obsoletely or feebly impressed before the base, exceedingly finely and closely punctured; elytra punctate-striate, the impressions shallow and placed close together, the interstices flat, finely and closely punctured; under surface rather dull, somewhat closely punctured, the flanks of the prothorax reticulate-punctate.

Length 6½–8½ millim. (♂ ♀.)

Hab. Guatemala, El Tumbador, Las Mercedes (*Champion*).—Colombia (*coll. F. Bates*).

Six examples. This species will be readily identified by its depressed form, the very narrowly margined and comparatively smooth thorax, and the peculiar cephalic armature of the male; in the female the intraocular space is narrowly raised on each side, impinging on the eyes as in the same sex of *U. bi-impressa*. Labelled *Hypogena triceros*, Dej., in Mr. F. Bates's collection.

A well-developed male from Las Mercedes is figured.

5. **Ulosonia bi-impressa.**

Tenebrio (?) *bi-impressus*, Latr. in Humb. et Bonp. Recueil d'Observ. de Zoologie, ii. p. 17, t. 31. fig. 6 (1833); Lacord. Gen. Col. v. p. 337, nota [1].

Ulosonia bicornis, Deyr. in litt.

? *Trogosita vacca*, Fabr. Syst. Eleuth. i. p. 153.

Hypogena bi-impressa, Dej. Cat. 3rd edit. p. 220 [2].

Hab. Mexico (*coll. F. Bates*), Ventanas (*Forrer*), Tuxtla, Playa Vicente, Chinantla (*Sallé*), Jalapa (*Höge*); British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala, Yzabal (*Sallé*), Pantaleon, Las Mercedes, El Tumbador, Paraiso, El Reposo, Mirandilla, Teleman (*Champion*); Nicaragua, Chontales (*Janson*); Panama (*coll. F. Bates*), Bugaba (*Champion*).—Colombia [1], Cartagena [2], Bogota; Guiana; Brazil.

A widely distributed and common species in Tropical America, ranging from Mexico to Brazil. The frontal horn in the male of this species is shorter than the hinder ones, and always in the form of a short conical tubercle, the hinder ones only developing into long porrect horns. The thorax is exceedingly finely and closely punctured, often with

* This insect is longer, narrower, and more parallel than represented on the Plate.

some scattered shallow coarser impressions, which are not nearly so coarse as in *U. tricornis* nor placed principally on the disc, but scattered irregularly over the surface. The surface beneath is punctured, the flanks of the thorax rugulosely. The two long horns upon the back of the head in the male are stout, subhorizontal, and slightly curved; in *U. tricornis* they are longer, thinner, and project upwards.

Latreille described this species upon a single imperfect example, probably a poorly developed male. Labelled *U. bicornis*, Deyr., in the Sallé Collection.

Trogosita vacca, Fabr., a species not identified by Lacordaire, is probably this or a closely allied species.

In Mr. F. Bates's collection there is a female example of this species labelled "United States, ex coll. Laferté;" possibly, however, there is some mistake about this locality.

6. **Ulosonia marginata.**

Uloma marginata, Lec. Ann. Lyc. New York, v. p. 149 [1].

Ulosonia marginata, Lec. Class. Col. N. A. p. 233 [2]; Horn, Rev. Ten. of Am. north of Mexico, p. 367 [3]; Lec. & Horn, Class. Col. N. A. p. 381.

Hab. North America, Gila [3] and Colorado [1] rivers, Colorado desert [2].

Found under cotton-wood bark just on our northern boundary. I have not seen this species.

METULOSONIA.

Metulosonia, F. Bates, Ent. Monthly Mag. ix. p. 261.

Five species are now known of this genus, all from Tropical America, two inhabiting our country.

1. **Metulosonia horni.**

Metulosonia horni, F. Bates, Ent. Monthly Mag. ix. p. 262 [1].

Hab. Panama [1] (*coll. F. Bates*).

Closely allied to *M. gyrinoides*, Chevr., from Brazil.

2. **Metulosonia reflexa.** (Tab. VII. fig. 20.)

Peltoides reflexus, Chevr. Petites Nouv. Ent. no. 198, ii. p. 237 (1878) [1].

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala, Yzabal (*Sallé*), Pantaleon, Zapote, El Tumbador, Torola, Las Mercedes (*Champion*); Nicaragua, Chontales (*Janson*).

Not uncommon in Guatemala, beneath sappy bark.

This species is again very closely allied to *M. horni*, but the upper surface is more sparingly and finely punctured, the head smoother, the coarser scattered punctures at

the sides of the thorax are finer and fewer in number, and the striæ of the elytra are finer towards the suture, the punctures finer and closer together.

An example from Belize is figured.

PHAYLLUS.

Mentum trapeziform, strongly deflexed on each side, longitudinally convex in the middle; last joint of the maxillary palpi broad, securiform, that of the labial palpi broad and ovate; ligula broad, exserted; antennæ about reaching to the base of the prothorax, widening a little outwardly, the third and fourth joints about equal in length, the fifth wider and about as broad as long, the sixth to the tenth transverse and about equal, the eleventh the width of, but much longer than, the tenth, and bluntly rounded at the apex; head small, rather narrow, deeply sunk into the prothorax, unarmed and similar in both sexes, the epistoma distinctly defined and broadly truncated in front; labrum transverse, visible from above; eyes rather large, obliquely transverse, extending beyond the slightly swollen antennary orbits; prothorax transverse, narrowly margined, rapidly narrowing anteriorly, the base strongly bisinuate and closely embracing the elytra, and with a short shallow longitudinal fovea on each side; scutellum triangular; elytra the width of the prothorax at the base, gradually narrowing from the base, the humeri prominent and formed by the somewhat prominent reflexed margin, regularly punctate-striate, the disc and also that of the thorax slightly flattened; legs slender, smooth, the tibial spurs small, the middle coxæ without visible trochantin, the first joint of the posterior tarsi much longer than the two following joints united, and, if anything, rather longer than the apical joint; prosternum narrow, horizontal, the apex a little produced and received by the concave mesosternum; intercoxal process triangular; epipleuræ broad, extending to the apex of the elytra. Form regularly oval, depressed.

This genus will include one species only, of small size; it probably represents the *Hypogena minuta* of Dejean's Catalogue. *P. minutus* is not uncommon under bark throughout our country, and extends southwards to Brazil. Of described genera, *Phayllus* is perhaps most nearly allied to *Metulosonia* and *Peltoides*.

1. **Phayllus minutus.** (Tab. VII. fig. 21; 21 *a*, labium; 21 *b*, maxilla and maxillary palpus.)

? *Hypogena minuta*, Dej. Cat. 3rd edit. p. 220[1].

Regularly oval, depressed, reddish testaceous or castaneous, slightly shining. Head finely and rather closely punctured, the epistoma well defined posteriorly by a transverse broad impression, the space between the eyes slightly raised transversely; eyes black: prothorax widest at the base, regularly rounded at the sides, much narrowed anteriorly, closely, finely, and equally punctured; elytra regularly punctate-striate, the interstices flat, finely, rather closely, and very evidently punctured; beneath shining, finely and not very closely punctured: legs reddish, sometimes a little darker.

Length 4–5½ millim. (♂ ♀.)

Hab. MEXICO (*coll. Oberthür*), Jalapa (*Höge*); BRITISH HONDURAS, R. Hondo, R. Sarstoon, Belize (*Blancaneaux*); GUATEMALA, San Juan in Vera Paz, Cubilguitz, Tamahu, Zapote, Pantaleon, El Tumbador (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui (*Champion*).—COLOMBIA, Cartagena[1]; BRAZIL.

A somewhat variable species as regards size and colour; small pallid examples have, as might be expected, the elytra more lightly punctate-striate.

An example of average size from Volcan de Chiriqui is figured.

ÆSYMNUS.

Mentum small, trapeziform, truncate in front, the anterior angles acute; inner lobe of the maxillæ armed with a distinct tooth at the apex; last joint of the maxillary palpi securiform, that of the labial palpi stout and truncate at the apex; mandibles bifid at the apex; antennæ about reaching to the base of the prothorax, distinctly widening outwardly, the third to the fifth joints widening a little and almost equal in length, the sixth wider and subtriangular, the seventh to the tenth broad and transverse, the eleventh the width of, but much longer than, the tenth, and bluntly rounded at the apex; head long, rather narrow, somewhat deeply sunk into the prothorax, unarmed and similar in both sexes, the antennary orbits but little swollen, gradually converging anteriorly, and impinging on the eyes behind, the epistoma broadly truncate; eyes large, transverse oval; prothorax rather broader than long, the lateral margins prominent, the base strongly bisinuate, the angles prominent though obtuse; scutellum large, scutiform; elytra long, slightly rounded at the sides, sinuate at the base, closely embracing the prothorax, regularly punctate-striate, somewhat broadly margined at the sides from the base to the apex (as in *Ulosonia*); legs smooth, slender; the intermediate and posterior tibiæ in the male longer and slightly curved inwardly; tibial spurs small; the middle coxæ without visible trochantin; tarsi very sparingly clothed with hair beneath, rather short and stout, the last joint of the posterior pair rather longer than the two following joints united; prosternum subhorizontal, the apex slightly produced and received by the concave mesosternum; epipleuræ broad, extending to the apex of the elytra.

A single species from Mexico, not very closely allied to any other described genus; it is perhaps nearest to a North-American species (described under the name of *Metaclisa marginalis*, by Dr. Horn) and *Cynæus*, but with the extended lateral margin of the elytra of *Ulosonia*.

1. **Æsymnus nitidus.** (Tab. VII. fig. 23, ♂; 23 *a*, labium; 23 *b*, maxilla and maxillary palpus.)

Oblong ovate, reddish brown or piceous black, shining. Head rather coarsely and sparingly punctured, the epistoma slightly impressed on each side; prothorax gradually narrowing anteriorly, widest a little before the base, the disc transversely impressed just before the base (the impression bounded on each side by a shallow oblique fovea), the anterior angles broadly produced and prominent, the surface sparingly and not very finely punctured; elytra wider than the prothorax at the base, slightly rounded at the sides, widest about the middle, coarsely but shallowly punctate-striate (the punctures rounded), the interstices flat and very evidently though sparingly punctured; beneath shining, sparingly and finely punctured; legs and antennæ reddish brown.

Length 6 millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*).

Four examples.

MOPHIS.

Mentum small, trapeziform, deflexed on each side; apex of the outer lobe of the maxillæ produced into a blunt tooth, the inner lobe armed on the inner side with short setæ; last joint of the maxillary palpi securiform, that of the labial palpi short ovate; ligula prominent, exserted; mandibles bifid; antennæ about reaching to the base of the prothorax, very gradually widening outwardly, the third joint nearly one and a half times as long as and a little narrower than the fourth, the fifth to the tenth distinctly wider than the fourth, decreasing very slightly in length and feebly triangular, the seventh to the tenth subtransverse, the eleventh the width of but longer than the tenth, and bluntly rounded at the apex; head deeply sunk into the prothorax, unarmed and similar in both sexes, the antennary orbits a little swollen and only slightly impinging on the eyes, the epistoma fairly well defined and deeply emarginate in front; eyes rather large, oblique,

extending laterally a little beyond the antennary orbits; prothorax transverse, narrowing anteriorly, the sides distinctly margined (in one species, *M. marginicollis*, thin and slightly expanded), the base bisinuate, narrowly margined, and with an oblique fovea on each side; scutellum scutiform; elytra distinctly wider than and fully three times as long as the prothorax, somewhat broadly margined, slightly rounded at the sides, regularly punctate-striate, with a short scutellar stria; legs long, slender, smooth; tibial spurs small; tarsi long and slender, the first joint of the hind pair much longer than the two following joints united; prosternum narrow, the apex slightly deflexed and produced; mesosternum feebly concave in front; metasternum longitudinally impressed; intercoxal process triangular; anterior coxæ subtransverse; middle coxæ with an indistinct trochantin, the cavities slightly open externally; epipleuræ abruptly ending a little beyond the last ventral suture.

This genus includes three species from Central America. *Mophis* might perhaps be almost equally well placed in the group "Diaperides;" the eyes, however, though large, are only feebly convex, and the trochantin of the middle coxæ is scarcely visible. The species are found under bark.

1. **Mophis marginicollis.** (Tab. VIII. fig. 3.)

Oblong ovate, depressed, dark reddish brown or black, slightly shining. Head closely and coarsely punctured, the epistoma broad and slightly convex and defined laterally by a longitudinal impression; prothorax strongly transverse, rounded at the sides, broadest a little before the base, the sides thin and slightly expanded, the lateral margins broadly impressed within and very prominent, the anterior angles prominent but obtuse, the hind angles subrectangular, the base with an oblique fovea on each side (often connected by a shallow transverse sinuous impression), the surface rather coarsely and somewhat closely punctured, the margins often paler; elytra regularly and rather coarsely punctate-striate, the interstices very feebly convex and very evidently and somewhat closely punctured, the suture and shoulders often paler; beneath reddish, shining, finely and not very closely punctured; legs reddish.

Length $5\frac{3}{4}$–$6\frac{1}{4}$ millim. (♂ ♀.)

Hab. GUATEMALA, Capetillo, Calderas 6000 feet, Quiche mountains 7000 to 9000 feet (*Champion*).

Many examples. This somewhat immature-looking species may be known by the thin and slightly expanded lateral margins of its thorax; I met with it rather commonly under bark of various trees in the forests at elevations of from 5000 to 9000 feet.

2. **Mophis affinis.**

Closely allied to *M. marginicollis*, and differing as follows:—Head more finely, not so closely, and more equally punctured, the epistoma not so well defined posteriorly; prothorax more finely, more closely, and not so deeply punctured, the sides not expanded; elytra more shallowly punctate-striate, the interstices flat and punctured as in *M. marginicollis*; beneath almost black, shining, sparingly and finely punctured; legs reddish.

Length 6 millim.

Hab. MEXICO, Jalapa, Oaxaca, Las Vigas (*Höge*).

Four examples.

3. **Mophis aterrimus.**

Form of *M. affinis*, and differing as follows:—Deep black; the prothorax distinctly narrower, longer, and less transverse, the basal foveæ shorter and more abruptly defined anteriorly, the surface (and also that of the

head) similarly punctured; elytra more deeply and not so finely punctate-striate, the interstices similarly punctured; legs and antennæ reddish brown.
Length 6 millim.

Hab. Mexico, Jalapa (*Höge*).

One example.

Group **DIAPERIDES.**

Species of this group are found in almost every part of the globe; the "Diaperides," however, are far more numerous in tropical regions, more especially in the New World. A large number of species inhabit Central America.

The "Diaperides" approach very closely to the "Ulomides;" the two groups indeed are connected by such genera as *Mophis*, *Æsymnus*, &c. The large number of species are contained in very few genera; certain of these, *Diaperis*, *Arrhenoplita*, and *Platydema*, are very widely distributed; others, *Liodema*, *Stenoscapha*, *Cosmonota*, *Hapsida*, and *Gonospa*, are confined to the New World. Some few new genera, mostly containing single species, have been required for the reception of the Central-American representatives of this group; one of these (*Lelegeis*) is remarkable for the great dilatation of the first joint of the anterior tarsi; another (*Paniasis*) has the first joint of the two front pairs of tarsi similarly dilated. In Laporte and Brullé's monograph of the "Diaperidæ" (Ann. des Sciences Naturelles, xxiii. pp. 325–410) only a single species (*Platydema fuliginosum*) is noticed from our country. Subsequent writers, Motschoulsky (Bull. Moscou, xlvi. part 1, pp. 466–482), and Chevrolat (Petites Nouv. Ent. ii. pp. 170–243, and Comptes Rendus de la Soc. Ent. Belg. xxi. pp. xcvii–clii) have, however, described or briefly diagnosed very many from Central America. These authors, in describing the Diaperidæ of their own and other collections, scarcely refer to previous writers on the subject, the result being, in numerous cases, merely to add to the synonymy, many of the species described by them as new being previously known. It is perhaps to be regretted that Chevrolat thought fit to publish the greater part of his descriptions in such a periodical as 'Petites Nouvelles Entomologiques,' or, indeed, that he published such brief descriptions at all.

To increase the difficulty of satisfactorily determining these insects, many of the species have been described upon very insufficient material, upon single and often mutilated or immature specimens. Many of Chevrolat's species (and Motschoulsky's also) are quite impossible to recognize without seeing the types; fortunately for our purpose a good many of these are contained in the collections of M. Sallé and Mr. F. Bates, and I have in consequence been able to satisfactorily identify the majority of the described Central-American species. Many of the opaque species of *Platydema* have the upper surface clothed with a sort of velvety pile, which more or less obscures the sculpture; all these seem to grease very readily, and require to be thoroughly cleaned before they can be critically examined.

I have not yet seen *Alphitophagus*, *Scaphidema*, or *Pentaphyllus* from our country, genera represented in North America as well as in Europe; the Central-American species of *Scaphidema* described by Chevrolat are erroneously ascribed to that genus, and belong mostly to *Liodema*.

In many of the genera the antennal joints are more or less serrate within; in some cases the outer four, five, or six joints forming a club. The eyes are often very large and oblique, and invariably project beyond the antennary orbits; the trochantin is always distinct. In *Liodema* and *Stenoscapha* the mesosternum is broadly produced. Certain species of *Arrhenoplita* (=*Evoplus*, Leconte) superficially resemble *Peneta* of the preceding group.

The Eastern genus *Ceropria*, numerous in species, would appear in great measure to replace *Platydema* in the tropical regions of the Old World.

By far the greater majority of our species are found under bark, or in fungoid growths (in which the earlier stages of these insects are passed) attached to decaying or dead trees, often in great numbers; others, *Hapsida* and *Gonospa*, on herbage or in the curled-up still-attached leaves of fallen trees in forest clearings. The humid forest-regions of Central America are especially rich in species of "Diaperides."

CORTICEUS.

Corticeus, Piller & Mitterpacher, Iter per Poseganam Sclavoniæ, p. 87 (1783); Crotch, Trans. Ent. Soc. 1870, pp. 46, 47.

Hypophlœus (Hellwig), Fabricius, in Schneider's Neu Mag. Ent. i. 1. p. 24 (1791); Ent. Syst. i. p. 500; Mulsant, Col. de France, Latigènes, p. 250; Lacordaire, Gen. Col. v. p. 338; Horn, Rev. Ten. of America north of Mexico, p. 386.

Species of this genus have been described from Europe, North and South America, Mexico, the Cape Verde and Canary Islands, &c.

The different species are found beneath sappy bark.

We have to record six from our country, of which four are now described, as it is believed, for the first time.

1. **Corticeus rufipes?** (Tab. VIII. fig. 4, ♂.)

Hypophlœus rufipes, Fabr. Syst. Eleuth. ii. p. 558; Lacord. Gen. Col. v. p. 339, nota[1].

Hab. Mexico (*coll. Oberthür*, *F. Bates*), Teapa, Playa Vicente (*Sallé*), Cordova (*Höge*); British Honduras, Belize, R. Sarstoon (*Blancaneaux*); Guatemala, El Tumbador, El Reposo, Las Mercedes, Pantaleon, Mirandilla (*Champion*); Nicaragua, Chontales (*Belt*).—Venezuela, Cumana, Caracas (*coll. Oberthür*); Brazil[1], Rio Janeiro.

A common species in Central America, though not yet received from Costa Rica or the State of Panama. Examples from Brazil and Venezuela agree perfectly with those from Mexico and Guatemala.

This widely distributed Tropical-American species seems to be the *Hypophlœus rufipes* of Fabricius; it may be known by its comparatively very large size (7–10 millim.), the acutely produced anterior angles of the thorax, the very prominent humeri, the somewhat convex interstices, the swollen inner apices of the femora, and the slightly pubescent under surface. In both sexes the inner edges of all the tibiæ are clothed with short fulvous hairs; in the male the tibiæ are rather longer, sinuous within and more dilated towards the apex, and the hairs longer than in the female.

Labelled *H. bacculus*, Deyr., in the Sallé collection.

2. Corticeus mexicanus.

Corticeus mexicanus, Reitter, Verh. zool.-bot. Ges. Wien, xxvii. p. 191[1].

Hab. Mexico[1] (*coll. Oberthür, F. Bates*), Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Cerro Zunil, Las Mercedes, Zapote (*Champion*); Nicaragua, Granada (*Sallé*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).—Colombia (*coll. F. Bates*).

A generally distributed and locally abundant species in our region; found beneath sappy bark, often in company with *C. rufipes*.

C. mexicanus may be readily known from *C. rufipes* by the comparatively shorter thorax, the straighter base of the elytra, the flat interstices, the produced outer apical angle of the anterior tibiæ, &c.; it varies greatly in size, from 4 to 7 millim.; allied, but more distantly, to the European *C. castaneus*, Fabr., and also to *C. cylindricus*, Reitter, from Colombia.

I am indebted to M. Réné Oberthür for the loan of the types of this species. Labelled *Hypophlœus flavipes*, Chevr., in the Sallé collection.

3. Corticeus longicornis.

Subcylindrical, moderately convex, black, shining. Head very closely and confluently punctured, broadly and shallowly excavate between the eyes, black, the oral organs red; antennæ long (reaching to beyond the middle of the prothorax), setose, the joints not very closely articulated, black, the basal and apical joints more or less red; prothorax very feebly rounded at the sides, slightly narrower behind, the base and apex almost straight, the angles distinct, the surface closely and not very finely punctured; elytra truncate at the base, the humeri distinct, finely and very distinctly punctured, the punctures arranged in close irregular rows; legs dark reddish brown, the outer apical angle of the anterior tibiæ angularly produced; beneath closely and coarsely punctured.

Length 4 millim.

Hab. Mexico (*coll. F. Bates*).

Two examples.

4. Corticeus puncticollis.

Cylindrical, convex, black, shining. Head in the female coarsely and closely punctured, in the male the epistoma smoother and convex, and the intraocular space transversely and narrowly raised in the

middle, the anterior margin and the oral organs more or less red; antennæ short, the seven outer joints moderately widened, the joints somewhat closely articulated, the two basal joints and the apical one ferruginous, the rest piceous; prothorax transversely convex, coarsely and rather closely punctured, the sides slightly rounded, about equally narrowed at the base and apex, the base and apex almost straight, the anterior angles obtuse, the posterior angles distinct; elytra truncate at the base, the humeri rounded, finely and very distinctly punctured, the punctures arranged in close irregular rows; legs reddish brown, the tibiæ darker, the outer apical angle of the anterior tibiæ angularly produced.

Length 3½–4 millim. (♂ ♀.)

Hab. GUATEMALA, Capetillo (*Champion*).

Two examples. This species may easily be known from *C. longicornis* by the shorter antennæ, the differently formed head, and the thorax more convex and more rounded at the sides.

5. **Corticeus pallidipennis.** (Tab. VIII. fig. 5.)

Subcylindrical, convex, black, shining. Head rather coarsely and somewhat closely punctured, black, the anterior margin and the oral organs more or less red; antennæ stout, the seven outer joints very broad, the four basal ones narrow, the two basal joints red, the rest black, the joints not closely articulated; prothorax finely and sparingly punctured, the apex almost straight, the base broadly but feebly rounded, the angles distinct; elytra not twice the length of the prothorax, the base truncate, confusedly and finely punctured, sordid yellow or testaceous, a large triangular scutellar patch continued narrowly along the suture to the apex, and rarely the extreme apex and lateral margins, piceous or black; legs light ferruginous, the tibiæ and femora often darker, the outer apical angle of the anterior tibiæ angularly produced; beneath shining, very coarsely and closely punctured anteriorly, the metasternum and ventral surface smoother and sparingly punctured.

Length 3–3¾ millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, near the city, Capetillo, Zapote, Cerro Zunil (*Champion*).

I met with this species in great profusion in various parts of Guatemala, beneath sappy bark; three examples only from Mexico.

6. **Corticeus crassicornis.** (Tab. VIII. fig. 6.)

Subcylindrical, moderately convex, deep black, very shining. Head finely and sparingly punctured; antennæ very stout, long, the joints not closely articulated, the seven outer joints very broadly widened, the basal joint ferruginous, the rest deep black; prothorax slightly rounded at the sides, narrowing a little anteriorly, widest about the middle, the base and apex almost straight, the anterior angles very obtuse, the posterior angles rectangular, the surface finely and distantly punctured; elytra comparatively broad and short, a little wider than the prothorax at the base, if anything widest behind the middle, the base almost straight, confusedly, finely, and sparingly punctured; legs thin, black, the coxæ, knees, and tarsi more or less ferruginous, the outer apical angles of the anterior tibiæ produced into a sharp tooth; beneath deep black, very shining, very closely and coarsely punctured anteriorly, the metasternum and ventral surface very sparingly and distantly punctured.

Length 3–3¼ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Eight examples. A comparatively short and broad species, with very stout antennæ; the upper and under surfaces entirely deep black, and very shining.

PALORUS.

Palorus, Mulsant, Col. de France, Latigènes, p. 250.

This genus contains a single cosmopolitan species, now introduced into many distant parts of the world.

1. Palorus melinus.

Hypophlœus melinus, Herbst, in Fuessly's Archiv, v. p. 37, t. 21. figg. B. *b*.
Hypophlœus depressus, Fabr. in Schneider's Neu Mag. Ent. i. 1, p. 25.
Ips unicolor, Oliv. Ent. ii. 18, p. 12, t. 2. f. 8.
Hypophlœus (*Palorus*) *depressus*, Muls. loc. cit. p. 250; Jacq. Duval, Gen. Col. d'Europe, iii. p. 181, t. 75. f. 374.

Hab. North America, Texas.—Mexico, Minas Viejas (*Dr. Palmer*).—Europe, &c.

An introduced species.

DIAPERIS.

Diaperis, Geoffroy, Ins. d'environs de Paris, i. p. 337 (1762); Laporte & Brullé, Ann. des Sciences Naturelles, xxiii. p. 333; Mulsant, Col. de France, Latigènes, p. 205; Lacordaire, Gen. Col. v. p. 301; Horn, Rev. Ten. of America north of Mexico, p. 379.

Representatives of this well-known genus are found in Europe, Algeria, Japan, Ceylon, the United States, and the northern part of Central America.

The different species are found in boleti, and also under bark, often in the greatest profusion.

1. Diaperis maculata.

Diaperis maculata, Oliv. Ency. Méthod. vi. p. 273[1]; Ent. iii. 55, p. 5, t. 1. figg. 2 *a*, *b*[2].
Diaperis hydni, Fabr. Syst. Eleuth. ii. p. 585[3]; Lap. & Brullé, Ann. Sciences Nat. xxiii. p. 335[4]; Horn, Rev. Ten. of Am. north of Mexico, p. 379[5].
Diaperis hydactina, Fabr. Ent. Syst. Suppl. p. 178[6].
Diaperis suturalis, Chevr. Petites Nouv. Ent. ii. p. 170[7].

Hab. North America[1 2 3 4 6], United States[5].—Mexico[7] (*coll. F. Bates*), Orizaba (*Sallé*); Guatemala, San Joaquin (*Champion*).

Central-American specimens agree perfectly with those from the United States.

This is one of the numerous species described by Chevrolat, without the slightest reference to previous writers; it is abundant, according to Dr. Horn, in the middle and Eastern States.

An allied species, *D. rufipes*, Horn, is found under cotton-wood bark in Arizona, not far from our northern boundary.

ARRHENOPLITA.

Oplocephala, Laporte & Brullé, Ann. Sciences Nat. xxiii. p. 338; Mulsant, Col. de France, Latigènes, p. 215; Lacord. Gen. Col. v. p. 302 (nomen præoc.).
Hoplocephala, Horn, Rev. Ten. of Am. north of Mexico, p. 379; Gemm. & Harold, Cat. vii. p. 1949.
Arrhenoplita, Kirby, Faun. Am. Boreal. p. 235.
Evoplus, Leconte, New Sp. Col. p. 128.

Numerous species of this genus have been described from the temperate and tropical regions of both hemispheres, the Antilles, Tahiti, &c.; two inhabit Europe, and several are found in the United States; none have hitherto been recorded from our country.

Evoplus, Leconte, is connected by numerous intermediate forms, and cannot be maintained as distinct from *Arrhenoplita*. One only of our species (*A. bicornis*) has the upper surface of a metallic greenish colour; the head in the male is usually armed with two erect tubercles or horns, in one or two species, however, these are almost obsolete; a few small forms have the elytra confusedly punctured, and without the usual rows of coarser impressions.

The genus is well represented in Central America by thirteen species; the name *Hoplocephala* being preoccupied in Reptilia, I adopt *Arrhenoplita* of Kirby. The different species are found in fungi and beneath bark, often in great profusion.

* *Elytra with regular rows of punctures.*

1. Arrhenoplita bicornis.

Hispa bicornis, Fabr. Gen. Ins. Mant. p. 215 (1777) [1]; Mant. Ins. i. p. 47.
Diaperis bicornis, Oliv. Ent. iii. 55, p. 6. t. 1. figg. 4 *a*, *b* [2].
? *Blaps metallica*, Palisot de Beauv. Ins. Afr. et Am. p. 139, t. 30 *b*. f. 2 [3].
Arrhenoplita bicornis, Kirby, Faun. Bor. Am. iv. p. 235 [4].
Oplocephala virescens, Lap. & Brullé, Ann. Sciences Nat. xxiii. p. 341 [5].
Hoplocephala bicornis, Horn, Rev. Ten. of Am. north of Mexico, p. 380 [6].
Oplocephala gracilis, Motsch. Bull. Moscou, xlvi. part 1, p. 467 [7].

Hab. North America [1 2], United States [3 4 5 6 7].—Mexico, Tuxtla, Cordova (*Sallé*), Jalapa, Esperanza (*Höge*); British Honduras, Belize (*coll. F. Bates*, *Blancaneaux*), R. Hondo (*Blancaneaux*); Guatemala, Zapote (*Champion*)

Central-American examples are greenish-æneous in colour, rarely tinged with blue in some few individuals from Mexico; they are much larger (4–5 millim.) than those from the United States ($3\frac{1}{2}$–4 millim.), and the males have stouter horns; other differences of importance I fail to find. This species is abundant in the United States, and equally so in the northern part of our country; it does not extend south of Guatemala. Poorly-developed males have the usual cephalic horns represented by two stout conical tubercles only.

2. **Arrhenoplita ferruginea.**

Evoplus ferrugineus, Lec. New Sp. Col. p. 128[1]; Horn, Rev. Ten. of Am. north of Mexico, p. 366[2].
Oplocephala castanea, Motsch. Bull. Moscou, xlvi. part 1, p. 467[3].

Hab. North America, Louisiana[1 2 3], New Orleans[3].—Mexico, Cordova, Vera Cruz (*Sallé*), Jalapa (*Höge*); Guatemala, San Gerónimo, Dueñas (*Champion*).—Antilles, Cuba (*coll. F. Bates*).

Many examples, agreeing well with others from the United States. In fully-developed males of this insect the head is broadly and deeply excavate on each side behind the eyes (instead of in the centre of the vertex, as in some of the allied species), and armed with two long, stout, curved horns; in poorly-developed individuals of the same sex (taken in company with the others) the horns are represented by stout conical tubercles, and the head is not excavate behind the eyes.

3. **Arrhenoplita clavicornis.** (Tab. VIII. fig. 7, ♂.)

Oblong ovate, strongly convex, reddish testaceous, shining. Head in the male finely and sparingly punctured, the epistoma triangularly extended on each side in front, the antennary orbits thin, slightly expanded, and rounded at the sides, armed between the eyes with two long, curved, suberect, converging horns, and the vertex deeply excavate in the middle; in the female coarsely and subrugosely punctured, transversely impressed in front, and the intraocular space slightly raised on each side just within the eye; antennæ with the six outer joints strongly widened, the fourth and fifth joints but little wider than the third; prothorax transverse, widening from the rounded anterior angles to beyond the middle, thence rounded to the base, the hind angles very obtuse, the surface coarsely and rather closely punctured, the base with a shallow oblique fovea on each side; elytra rather short, subparallel to beyond the middle, thence rounded and narrowing to the apex, with regular rows of coarse shallow punctures, the interstices convex outwardly and comparatively coarsely and rather closely punctured, more testaceous in colour than the head and thorax; legs and antennæ testaceous; beneath shining, the ventral surface darker and confluently and rather coarsely punctured.

Length 3–4 millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*).

Six examples. Smaller and comparatively shorter in form than *A. ferruginea*; the antennæ with the six outer joints only widened; the cephalic horns in the male erect and converging, the thorax less rounded at the sides and narrowing from the middle to the apex, the interstices of the elytra much more coarsely punctured. This is one of five allied species found by M. Sallé at Cordova.

4. **Arrhenoplita oblonga?**

Hoplocephala oblonga, Chevr. Compt. Rendus de la Soc. Ent. Belg. xxi. p. xcvii.[1]

Hab. Nicaragua, Chontales (*Belt*).—Brazil, Parahyba[1].

Four examples (three female and one male) of an *Arrhenoplita* from Chontales are possibly referable to *A. oblonga*, Chevr.: the head in the male being similarly armed, *e. g.* with two short conical horns.

These specimens from Chontales are equal in size to the smallest individuals of the variable and allied *A. armata*, Lap. and Brullé, of South America. The head in the male is armed with two short, stout, conical horns, the vertex deeply but not broadly excavate in the middle, the epistoma swollen and with a minute prominence on each side on the anterior margin, the surface finely and sparingly punctured; in the female more closely and more coarsely punctured, more deeply excavate anteriorly, the intraocular space a little raised and swollen on each side and shallowly impressed in the middle. The prothorax and elytra are formed much as in *A. armata*, the elytra (the interstices especially) are, however, rather more finely punctured. Compared with *A. armata* the head in the female is more sparingly punctured, the intraocular space flatter in the middle and with a distinct shallow fovea in the centre; the male with much shorter horns, the epistoma more swollen, the excavation on the vertex smaller.

5. Arrhenoplita lecontii.

Evoplus lecontii, F. Bates, Ent. Monthly Mag. ix. p. 233 (♂)[1].

Hab. Mexico, Cordova (*Sallé*).—Colombia [1].

Both sexes of this species were found by M. Sallé. In the single female example the head is broadly transversely excavate, the intraocular space transversely raised (terminating in a rounded prominence on each side), the epistoma swollen and sharply defined; the thorax narrower and less transverse than in the male. Compared with the type, a male, of *A. lecontii*, the Mexican example of the same sex has the cephalic horns rather longer and more curved towards the apex. Mexican examples are of a lighter castaneous colour than the Colombian type.

6. Arrhenoplita lutea.

Hoplocephala lutea, Chevr. Compt. Rendus de la Soc. Ent. Belg. xxi. p. xcvii.[1]

Hab. Mexico, Esperanza, Jalapa (*Höge*).—Venezuela [1].

Examples of both sexes of a species of this genus, sent by Herr Höge from Mexico, agree very nearly with the description of *A. lutea*. The head in the male has two short conical tubercles (sometimes connected by a feeble sinuous transverse elevation), and the epistoma swollen and with scarcely any indication of a prominence on each side on the anterior margin; in both sexes the head in front is deeply semicircularly excavate; the thorax in the male is scarcely broader than in the female, and (as usual) the sides are more rounded and a little constricted just before the base. Compared with the same sex of *A. castanea*, F. Bates, from Colombia, the male may be readily known by the different structure of the head; the head, indeed, of the male of the Mexican insect somewhat resembling the female of *A. castanea*, but with stronger tubercles between the eyes, and without fovea in the middle.

7. **Arrhenoplita distans.** (Tab. VIII. figg. 8, ♂; 8*a*, head from the front.)

Oblong ovate, subparallel, strongly convex, castaneous, very shining. Head broad; in the male almost impunctate, broadly excavate anteriorly, the epistoma with a small rounded prominence on each side in front, the antennary orbits swollen and raised, the eyes very widely separated, the intraocular space armed on each side with a stout straight erect horn (the broad space between flat), the vertex not impressed; in the female finely and distantly punctured, broadly excavate anteriorly, the epistoma slightly swollen, and sometimes with a small prominence on each side as in the male, the front broadly flattened (the depression limited behind by an oblique extension of the small rounded prominence placed on each side of the broad intraocular space); antennæ with the eight outer joints widened, ferruginous; prothorax transverse, the base and apex bisinuate, the anterior angles prominent, the hind angles broadly rounded, strongly margined at the sides, the sides in the male rounded, in the female straighter and widest a little before the base, moderately convex (more strongly and transversely in the male), the surface finely and sparingly punctured; scutellum large, subtriangular; elytra with regular rows of shallow, distantly placed, coarse punctures, the interstices flat, sparingly and finely punctured, the apices slightly acuminate; legs and antennæ pale ferruginous; beneath shining, light castaneous, sparingly and finely punctured; epipleuræ not extending to the apex of the elytra.

Length $5\frac{3}{4}$–$6\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*).

Five examples. This shining castaneous species may be known from its allies by the erect cephalic horns of the male being separated by a very wide, smooth, and flat space; the female by the broad flattened frontal depression, limited behind by an oblique extension of the small prominence placed on each side just within the widely separated eyes.

8. **Arrhenoplita obsoleta.**

Elongate oval, subparallel, strongly convex, varying in colour from castaneous to black, shining. Head in the male rather coarsely and closely punctured, broadly excavate anteriorly, the epistoma swollen, sharply defined, and usually armed on each side in front with a minute rounded prominence, the intraocular space with a small rounded prominence on each side just within the eye (much as in the females of some of the allied species) and often with a small impunctate space in the middle; in the female more coarsely and closely punctured, transversely excavate anteriorly, the epistoma less swollen than in the male; antennæ with the eight outer joints widened; prothorax transverse, widening from the rounded anterior angles to beyond the middle, thence rounded to the base, the apex almost straight, the base bisinuate, the surface rather coarsely and not very finely punctured; elytra with regular rows of closely placed, rather coarse, shallowly impressed punctures, the interstices rather coarsely and sparingly punctured and with traces of shallow transverse wrinkles; legs and antennæ light ferruginous; beneath shining, closely, confluently, and irregularly punctured.

Length $3\frac{1}{2}$–5 millim. (♂ ♀.)

Hab. Mexico, Cordova, Vera Cruz (*Sallé*), Jalapa (*Höge*).

Many examples. The head in the male is formed much as in the female of *A. amazonica*, F. Bates, an insect closely allied to the present species; the female does not differ greatly from the male. In *A. obsoleta* we have but a very slight development of the male cephalic armature, the horns being represented by very small tubercles, such as we observe in the females of most of the other species of the genus.

9. Arrhenoplita picea.

Oplocephala picea, Lap. & Brullé, Ann. Sciences Nat. xxiii. p. 344[1].

Hab. GUATEMALA, San Gerónimo (*Champion*).—COLOMBIA [1], Cartagena (*coll. F. Bates*).

Examples of both sexes were captured at San Gerónimo. The head in the male of this species is armed with two short, very stout horns, and the epistoma with a distinct conical tubercle in the middle; the latter character is not mentioned by the describer. Our insect agrees perfectly with a male example, from Cartagena, contained in Mr. F. Bates's collection.

10. Arrhenoplita nigricornis.

Elongate ovate, moderately convex, reddish brown, shining. Head transversely excavate anteriorly, coarsely but not closely punctured, the epistoma swollen and sharply defined; antennæ with the eight outer joints widened, the three basal joints red, the extreme apex of the last joint ferruginous, the rest deep black; prothorax transverse, widest about the middle, feebly rounded at the sides, the base and apex bisinuate, the anterior angles rounded, the surface rather coarsely but not very closely punctured; scutellum scutiform; elytra long, distinctly broader than the prothorax, with rows of very coarse, deep, not very closely placed punctures, the interstices very finely and distantly punctured, of a clearer and more uniform colour than the head and prothorax: legs and palpi light ferruginous.

Length $4\frac{1}{2}$ millim. (♀.)

Hab. GUATEMALA, San Gerónimo (*Champion*).

The elytra in this small species are comparatively long, distinctly broader than the thorax, and with rows of very coarse punctures; in the single individual before me they are broadly compressed on each side before the middle, which, however, is probably due to accidental circumstances. *A. nigricornis* is not nearly allied to any known species, though perhaps nearest to *A. picea*.

** *Elytra confusedly punctured.*

11. Arrhenoplita inermis.

Oblong ovate, strongly convex, castaneous, finely pubescent, shining. Head rather coarsely and closely punctured, transversely excavate anteriorly, the intraocular space slightly raised and swollen on each side just within the eye; antennæ with the seven outer joints widened, the fourth joint a little wider than the third; prothorax transverse, widest about the middle, the apex almost straight, the anterior angles obtuse, the base bisinuate, the surface punctured like the head; scutellum triangular; elytra the width of and a little rougher than the prothorax, closely, confusedly, and somewhat coarsely punctured, with indications of numerous fine transverse wrinkles; legs, antennæ, and palpi testaceous; beneath shining, very closely and confusedly punctured and wrinkled.

Length $2\frac{3}{4}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Six examples. This is one of several small Central-American species allied to *A. bituberculata*, Oliv. (an insect described upon examples supposed, according to Chevrolat, to have been introduced in an exotic boletus into France, and possibly of

South-American origin), all of which have confusedly punctured elytra, without any indication of rows of coarser impressions. In *A. inermis* the head appears to be similarly formed, and unarmed in both sexes.

12. **Arrhenoplita cioides.** (Tab. VIII. fig. 9, ♂.)

Elongate ovate, moderately convex, testaceous, finely pubescent, slightly shining. Head in the male finely and sparingly punctured, the epistoma rather long and narrow and with a small triangular prominence on each side in front, the vertex armed with two long stout horns (these project forwards in a line with the body, and their apices are thinner, slightly pointed, and curved downwards), the space between the horns transversely raised, the space immediately behind them broadly and deeply excavate, the front (if viewed sideways) almost vertical; eyes small, oblique; antennæ with the seven outer joints widened and more or less triangular, the sixth to the tenth joints transverse, the fourth joint wider than the third; prothorax transverse, widest about the middle, the apex almost straight, the anterior angles rounded, the base bisinuate, the sides slightly rounded, the surface very closely and not very finely punctured; elytra the width of the prothorax, but more confusedly, more shallowly, and not so closely punctured; legs and antennæ testaceous.

Length $2\frac{1}{3}$ millim. (♂.)

Hab. Panama, Caldera in Chiriqui (*Champion*).

One example. This insect superficially resembles a species of *Cis*.

13. **Arrhenoplita pentaphylloides.**

Ovate, moderately convex, testaceous, finely pubescent, slightly shining. Head very finely and closely punctured, the epistoma well defined; in the male the vertex armed with two stout conical tubercles, and the space behind the tubercles transversely and deeply excavate; eyes small, feebly emarginate; antennæ gradually widening outwardly, the six outer joints of about the same form and width as in the allied species; prothorax strongly transverse, the sides slightly rounded, widest a little before the base, the apex not deeply emarginate, the anterior angles rounded, the base bisinuate, the surface very closely and finely punctured; elytra more confusedly and not so closely punctured and rather more shining than the prothorax; legs and antennæ testaceous; beneath shining, finely and rather closely punctured.

Length $2\frac{1}{3}$-$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. Guatemala, Cerro Zunil, Capetillo (*Champion*).

Numerous examples. This insect resembles the European *Pentaphyllus testaceus*, Hellw.; the eyes, however, though small, are feebly emarginate, and the antennæ do not possess a loose five-jointed club, but have the joints gradually widened from the base. The eyes in this species and in *A. cioides* are much smaller and less coarsely facetted than in *A. bituberculata* and *A. inermis*. All these small forms, with confusedly punctured elytra, are, however, very nearly allied in general structure to the other and larger species with regular rows of elytral punctures.

SAPTINE.

Last joint of the maxillary palpi subtriangular; antennæ gradually widening from the base, the four basal joints slender, the fourth joint but little shorter and scarcely wider than the third, the fifth and sixth joints wider and subtriangular, the seventh distinctly broader than the sixth, the seventh to the tenth decreasing in length, the seventh and eighth subtriangular, the ninth and tenth transverse, the eleventh much longer than the tenth and bluntly rounded at the apex: head short, deeply sunk into the prothorax,

the antennary orbits not extended, the epistoma short and not clearly defined; eyes not very large, slightly oblique; prothorax convex, transverse, narrowing from the base; scutellum triangular; elytra convex, coarsely punctate-striate; legs slender, the outer apical angles of the tibiæ armed with a distinct, fine tooth, the first joint of the posterior tarsi longer than the two following joints united; prosternum horizontal, triangularly produced, margined within, and received by the narrow and deeply excavate V-shaped mesosternum: epipleuræ extending to the apex of the elytra; trochantin distinct: form oval, convex.

A new genus is required for a small insect found in Mexico by Herr Höge. The structure of the head, antennæ, &c. forbids association with *Platydema*; *Saptine* will be known from its allies by the ovate, convex form, the slender basal joints of the antennæ, the deflexed anterior angles of the prothorax, and other characters given above.

1. **Saptine ovata.** (Tab. VIII. fig. 10.)

Obovate, convex, bronze-black, shining. Head coarsely and rather closely punctured; antennæ with the two basal joints, and the apical one, ferruginous, the rest black; prothorax convex, rapidly narrowing from the base, the sides rounded anteriorly, the anterior angles deflexed and rounded and not projecting outwardly, the apex broadly emarginate, the base strongly bisinuate and with a distinct oblique fovea on each side, the surface regularly, somewhat coarsely, and not very closely punctured; elytra the width of the prothorax at the base, widest in the middle, coarsely punctate-striate, the interstices feebly convex outwardly and very finely and closely punctured; legs dark ferruginous; beneath brownish black, shining, with very coarse scattered impressions.

Length 3¼ millim.

Hab. Mexico, Jalapa (*Höge*).

One example.

PLATYDEMA.

Platydema, Laporte & Brullé, Annales des Sciences Naturelles, xxiii. p. 350 (1831); Mulsant, Col. de France, Latigènes, p. 211; Lacordaire, Gen. Col. v. p. 304; Horn, Rev. Ten. of America north of Mexico, p. 380.

Typhobia, Pascoe, Ann. & Mag. Nat. Hist. 4th ser. iii. p. 279.

Neomida, Motschoulsky, Bull. Moscou, xlvi. part 1, p. 476.

Histeropsis, Chevrolat, Petites Nouv. Ent. ii. p. 221 (1878).

This genus is well represented in the temperate and tropical regions of both hemispheres, and contains a very large number of species. The metropolis of *Platydema* is, however, in Tropical America, from whence many species are known. About fifteen species inhabit America north of Mexico; from our country we now record no less than forty-seven.

Some of the species range over a very large extent of country, one or two extending from Brazil to Mexico; others are altogether as local, and seem confined to a limited area. Laporte and Brullé (*op. cit.*) enumerated fifty species, of which some four fifths are from the New World, but one only is noticed from Central America. This number has since been very largely added to by Chevrolat and Motschoulsky.

Chevrolat, in view of the great extent of the genus, which will undoubtedly require extensive subdivision by future monographers, has proposed to include under the generic

name *Histeropsis* (this itself to contain four groups) various species; and Motschoulsky (*loc. cit.*), for a similar purpose, separates others under *Neomida*, a manuscript name in itself highly objectionable, it having been already applied to numerous widely different genera. I have not thought it necessary or advisable to adopt any of these so-called genera.

The smooth shining species have a different facies from the dull and opaque ones; the eyes are comparatively smaller, the epistoma often not clearly defined, &c., but in general structure they agree. Two species (*P. mexicanum* and *P. viriditinctum*) resemble somewhat in form the European *P. dytiscoides*.

Platydema is highly characteristic of the forest-regions of Tropical America, numerous species abounding in many localities. The different species are found in fungoid growths, on fallen timber, in which the earlier stages are passed, and in company with representatives of other groups of "Tenebrionidæ," and of the Erotylidæ and Endomychidæ, are everywhere to be met with.

The following table will assist in the recognition of the numerous Central-American species:—

Head tuberculate or horned in the male.
- Intraocular space concave in the middle, a slender porrect horn on each side in the male, longitudinally raised on each side in the female; surface shining . . . . . *excavatum.*
- Intraocular space in the male concave in the middle, and longitudinally raised on each side, in the female slightly impressed; surface opaque.
  - Elytra with angulated transverse paler bands . . . . . *undatum, rodriguezi.*
  - Elytra dull black . . . . . *hondurense.*

Head unarmed in the male.
- Intraocular space distinctly impressed in the middle; form more or less obovate, depressed.
  - Upper surface shining, bronze black . . . . . *viriditinctum.*
  - Upper surface slightly shining, brownish black . . . . . *mexicanum.*
- Intraocular space plane, or at most feebly impressed; form more or less ovate.
  - Upper surface unicolorous, opaque.
    - Dull black, rarely dark ferruginous.
      - Form oblong-ovate or ovate . . . . . *agile, angulatum, subquadratum, sobrinum, ferrugineum, fuliginosum, melancholicum.*
      - Form rotundate . . . . . *rotundatum, rugiceps, oculatum.*
    - Dark reddish brown, pruinose; form rotundate . . . . . *nicaraguense.*
      - Ferruginous; form oblong-ovate . . . . . *immaculatum.*

Upper surface maculated, opaque.

Form oblong-ovate.

Dull black above, a transverse red spot (sometimes united at the suture) on each elytron . . . . *diophthalmum, bimaculatum, fasciatum, submaculatum, transversum.*

Dull black above; elytra ferruginous, a black spot on each . . . . . *bisignatum.*

Dull black above; elytra with two transverse red bands . . . . . *högei.*

Dull black above; elytra clouded with red . . . . *monilicorne.*

Ferruginous; three black spots on each elytron . . *sexnotatum.*

Ferruginous; thorax black; elytra red, with three black spots . . . . . *sexmaculatum.*

Red; elytra black, with three streaks, an oblique spot at the apex, and two fasciæ, red or flavous . . *fasciatocolle.*

Form ovate.

Brownish black; thorax spotted; elytra with longitudinal yellow and black interrupted streaks . . *guatemalense.*

Testaceous; thorax marked with black at the base; one large and three small black spots on each elytron . . . . . *ornatum.*

Reddish testaceous; thorax spotted; each elytron with four large black spots . . . . . *pretiosum.*

Brownish black; elytra with two angulated transverse testaceous bands . . . . . *panamense.*

Form broad ovate.

Dull black above; elytra with two angulated transverse red bands . . . . . *tibiale.*

Dull black above; elytra red, each with about seven rounded or longitudinal black spots (sometimes united) . . . . . 15-*maculatum.*

Testaceous; thorax marked with black at the base; elytra with a broad angulated band behind the middle (often divided), and three small black spots on each . . . . . *nigromaculatum.*

Dull brownish black above; elytra with two narrow (often interrupted) angulated reddish testaceous bands . . . . . *breve.*

Upper surface shining, more or less convex; maculated or (rarely) unicolorous.

Form oblong ovate or ovate.

Black; thorax red, with a large transverse black spot; elytra with two angulated transverse testaceous bands (not reaching the suture) . . . . . *versicolor.*

Similar; thorax almost entirely red; the base of the elytra also narrowly testaceous . . . . . *tricolor.*

Black; elytra with two reddish testaceous angulated transverse bands; antennæ black, the two basal joints and the extreme apex red . . . . . *biplagiatum.*
Similar; thorax red at the sides; antennæ red . . *maculipenne.*
Thorax black, the sides testaceous; elytra testaceous, with black spots (each elytron usually with a broad transverse patch behind the middle, a large oblique apical spot, and two small spots at the base) . . *dimidiatum.*
Head black; thorax testaceous, with two small spots, and the base (partly), black; elytra testaceous, part of the base, the suture, a broad transverse mark (often divided) about the middle, and one or two small spots, black . . . . . *elegans.*
Reddish testaceous; thorax with three dark streaks; each elytron with two spots near the base, and several longitudinal streaks in the apical half, black *lucens.*
Reddish testaceous; thorax with a broad black patch; each elytron with three very large spots, and the scutellar region also, black . . . . . *cordovense.*
Red, immaculate . . . . . *unicolor.*
Form broad ovate.
Reddish testaceous; thorax with six small black spots; each elytron with three large and two small black spots . . . . . *venustum.*

1. **Platydema excavatum.** (Tab. VIII. fig. 11, ♂.)

Diaperis excavata, Say, Journ. Acad. Phil. iii. p. 267 (1824) [1]; Horn, Rev. Ten. of Am. North of Mexico, p. 381; Leconte, Complete Writings of Thomas Say, ii. p. 157.
Platydema tuberculata, Lap. & Brullé, Ann. Sciences Nat. xxiii. p. 352 [2] (1831).
Platydema tuberculatum, Chevr. Petites Nouv. Ent. ii. p. 210 (♂).
Platydema fraternum, Chevr. loc. cit. p. 210 [3].
Platydema parvulum, Casey, Contrib. to the Descript. and System. Col. of North America, part i. p. 50 [4]; Horn, Ent. Americana, i. p. 111 (1885).

Hab. North America, United States [1 4].—Mexico (*coll. F. Bates*), Vera Cruz, Cordova (*Sallé*), Jalapa, Esperanza, Cerro de Plumas (*Höge*); British Honduras, Belize, R. Sarstoon (*Blancaneaux*); Guatemala, Zapote, Capetillo, Purula (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui (*Champion*).—Colombia (*coll. F. Bates*).—Antilles, Cuba [2], Santo Domingo [3].

A wide ranging species, common throughout our region, and extending southwards to Colombia; it is found abundantly, according to Dr. Horn, in the United States, and is also recorded from the Antilles. Most of the specimens from Guatemala southwards are considerably broader and larger than those from more northern localities, those from British Honduras are, however, the size of Mexican examples.

I have examined about 200 individuals, including specimens from the United States, and find every intermediate form between the large and small examples. *P. fraternum*, Chevr., from Santo Domingo, of which I have a typical example before me, is merely small *P. excavatum*; it is identical with specimens from the United States. Allied forms are found in Australia (*P. striatum*, Montr.,=*P. oriticum*, Pascoe), in Madagascar (*P. fronticorne*, Klug), in Japan (*P. nigroœneum*, Motsch.), &c.

The head in the male of *P. excavatum* is furnished with two thin porrect horns, placed one on each side of the intraocular space and just within the eyes, the same part in the female being longitudinally raised; in both sexes there is a deep excavation (deepest in the male) between the elevations.

We figure a well-developed male from the Volcan de Chiriqui.

2. **Platydema undatum.** (Tab. VIII. figg. 13, ♂; 14, var. ♀.)

Neomida picta, Motsch. Bull. Moscou, xlvi. part 1, p. 480 (1873)[1].
Platydema undatum, Chevr. Petites Nouv. Ent. ii. p. 194 (1878)[2].

Hab. MEXICO[1] (*Stark*[2], *in coll. Bates*), Vera Cruz, Orizaba (*Sallé*), Esperanza, Jalapa (*Höge*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Balheu (*Champion*); NICARAGUA, Chontales (*Belt*); PANAMA[1], Volcan de Chiriqui, Bugaba (*Champion*).

A wide ranging and not uncommon species in Central America. This insect is well described by Motschoulsky, who also notices a variety from Panama, in which the broad angular transverse bands of the elytra are ferruginous and margined only with black (the narrow testaceous zigzag bands in consequence standing out more clearly), instead of being wholly black. I have examined a typical example of *P. undatum*, Chevr. (labelled "type, Stark") in Mr. F. Bates's collection; this individual, as regards the elytra, agrees well with Motschoulsky's description, though the head and thorax differ greatly; on examination, however, I find that the specimen has been gummed together, and that the head and thorax at present attached to it belong to another species. Motschoulsky's name being preoccupied, we have to fall back upon that of Chevrolat.

We figure a typical male from Jalapa, and also a female of the variety from Volcan de Chiriqui.

3. **Platydema rodriguezi.** (Tab. VIII. fig. 15, ♂.)

Ovate, moderately convex, dull black, opaque. Head red or reddish brown; the basal half almost smooth, the frontal half slightly shining and shallowly, finely, and confusedly punctured; the epistoma defined posteriorly by a broad and deep transverse impression in both sexes; in the male the intraocular space deeply longitudinally excavate in the middle and with an elevation on each side just within the eye, in the female this space slightly raised on each side and without excavation in the middle; antennæ with the four or five basal joints, and the apical one, red, the rest black, joints 8–10 transverse; prothorax strongly transverse, the sides rapidly converging from the base and scarcely rounded, the apex arcuate

emarginate (but not deeply); the anterior angles rounded, the base bisinuate, the surface (when seen under a strong lens) exceedingly finely and sparingly punctured, dark reddish brown or black, the margins sometimes paler; scutellum triangular; elytra feebly rounded at the sides, finely and regularly punctate-striate (the punctures small and shallow and closely placed), the interstices smooth, dull black, with two narrow, interrupted, zigzag, transverse bands (one before, the other considerably beyond the middle) and the apex reddish testaceous, the base very narrowly, the suture broadly, and the reflexed margins (and epipleuræ) red or reddish brown; legs red; beneath shining, reddish brown.

Length 5–6 millim. (♂ ♀.)

Hab. GUATEMALA, Capetillo, Cerro Zunil (*Champion*).

Numerous examples. Allied to *P. undatum*, the head in the male formed as in that species, but abundantly distinct.

I have named this species after Señor Don Juan Rodriguez, a well known Coleopterist, to whom the present writer is much indebted, and in the vicinity of whose estate in Guatemala this species was first captured.

4. Platydema hondurense.

Subelliptic, moderately convex, dull black, opaque. Head ferruginous, the basal half a little darker, slightly shining, sparingly and very finely punctured, transversely impressed in front, the epistoma well defined at the sides and posteriorly by a narrow deeply impressed line; the intraocular space longitudinally raised and swollen on each side (just within the eyes), and concave in the middle in the male, very slightly impressed in the middle in the female; antennæ with the four basal joints, and the outer half of the apical one, red, the rest piceous; prothorax comparatively narrow, transverse, the sides slightly rounded and converging from the base, the apex somewhat deeply arcuate emarginate, the anterior angles obtuse and not prominent, the base strongly bisinuate, and with a shallow oblique fovea on each side, the surface (when viewed with a strong lens) exceedingly finely, sparingly, and very shallowly punctured; scutellum scutiform, reddish brown; elytra a little wider than the prothorax at the base, slightly rounded at the sides, widest about the middle, the humeri rather prominent, regularly punctate-striate (the punctures closely placed, fine towards the suture, coarser towards the sides), the interstices exceedingly minutely and sparingly punctured; palpi and legs light ferruginous; beneath and the epipleuræ light ferruginous, shining, sparingly and finely punctured.

Length 5½–6 millim. (♂ ♀.)

Hab. BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*).

Two examples. The structure of the head and the comparatively narrow thorax will separate this species from *P. sobrinum*, *P. subquadratum*, &c.; the head in the male is formed much as in *P. undatum*.

5. Platydema viriditinctum.

Oblong ovate, depressed, bronze-black above, shining. Head finely, sparingly, and shallowly punctured, broadly impressed transversely in front, the epistoma broad and narrow, the intraocular space shallowly impressed in the middle; antennæ short, about reaching to the base of the prothorax, joints 9 and 10 transverse, light ferruginous; prothorax short, strongly transverse, the sides feebly rounded and narrowing from the base, the apex broadly and somewhat deeply emarginate, the anterior angles rounded, the base strongly bisinuate, and with a distinct longitudinal fovea on each side, the surface very finely and sparingly punctured; scutellum large, scutiform; elytra broader than the prothorax at the base, about four times as long as the prothorax, rather broadly margined, the humeri prominent, the base deeply sinuate, widest about the middle, very feebly rounded at the sides, somewhat broadly rounded behind, finely and shallowly punctate-striate, the interstices flat, and sparingly and very finely punctured; labrum, palpi, and legs

light ferruginous; beneath shining, reddish brown, sparingly and finely punctured, the metasternum smoother, the ventral surface longitudinally wrinkled and punctured.

Length 6–6½ millim.

Hab. MEXICO, Parada (*Sallé*).

Two examples. This species may be known by its somewhat depressed form, dark greenish-bronze upper surface, short thorax and antennæ, &c. It should be placed near the European *P. dytiscoides*, Rossi, the head being formed as in that species.

6. **Platydema mexicanum.** (Tab. VIII. fig. 12.)

Obovate, depressed, dull brownish black, slightly shining. Head transversely impressed in front, paler along the anterior margin, the epistoma defined by a fine impressed line, finely and sparingly punctured, the eyes large; antennæ short, reaching a little beyond the base of the prothorax, joints 8–10 transverse, ferruginous; prothorax small, strongly transverse, the apex broadly emarginate, the anterior angles almost rounded, the base strongly bisinuate and with a shallow oblique impression on each side, the sides strongly margined and converging from the base, the surface very finely and distantly punctured; scutellum large, scutiform; elytra about four times as long as the prothorax, very distinctly wider than the prothorax at the base, slightly rounded at the sides, widest a little beyond the middle, somewhat abruptly narrowing behind, the apices slightly produced, regularly punctate-striate (the punctures narrow, close, and deeply impressed), the interstices flat, very sparingly, shallowly, and minutely punctured; palpi and legs ferruginous; tibiæ rather short, slightly curved, the spurs small; beneath shining, sparingly punctured, the metasternum smoother, the ventral surface more closely and evidently punctured, and longitudinally wrinkled at the sides; prosternum horizontal, the apex produced and received by the concave V-shaped mesosternum.

Length 5¾–6¾ millim.

Hab. MEXICO (*coll. F. Bates*), Ciudad in Durango (*Forrer*), Pinos Altos in Chihuahua (*Buchan-Hepburn*), Jalapa (*Höge*).

Nine examples. Of quite a different facies from any other species recorded here, and perhaps most nearly allied to the North-American *P. americanum* and *P. subcostatum*. *P. mexicanum* may be known by its depressed obovate form, the comparatively very short and narrow thorax, and the short and slightly curved tibiæ. An example from Jalapa is figured.

7. **Platydema agile.**

Platydema agile, Chevr. Petites Nouv. Ent. ii. pp. 178, 187 [1].

Hab. MEXICO [1], Playa Vicente (*Sallé*); BRITISH HONDURAS, R. Sarstoon, Belize (*Blancaneaux*); GUATEMALA, El Reposo (*Champion*); NICARAGUA, Chontales (*Belt*).—COLOMBIA [1]; VENEZUELA (*coll. F. Bates*); GUIANA, Cayenne [1].

A widely distributed but apparently rare species, represented by one or two examples only from each locality.

P. agile is a large, dull, velvety-black species, with the front of the head, the legs, antennæ, and under surface rufous; it is the largest of the Central-American species. I have examined a typical example (named by Chevrolat) of *P. agile*, contained in

Mr. F. Bates's collection. The length given (20 millim.) is evidently a misprint for 10 millim.; the insect varies in size from $9\frac{3}{4}$–$11\frac{1}{2}$ millimetres.

8. **Platydema angulatum?**

Platydema angulatum, Chevr. Petites Nouv. Ent. ii. p. 186[1].

Hab. Mexico [1].

Three examples from Parada, in M. Sallé's collection, are labelled as above; they may or may not represent Chevrolat's species. The following is the description:—"Ovale, aterrimum, opacum, elongatum; capite antice rotundato, rubro-marginato, ante oculos sulcato; labio, palpis, antennis, epipleuris pedibusque rubris; prothorace transverso, supra scutellum modice rotundato, lateribus anguste sulcato atque rubido; scutello triangulari; elytris tenue sulcatis, in sutura angulatis.—Long. $6\frac{1}{2}$ millim., lat. $3\frac{3}{4}$ millim.—Mexico."

"L'angle terminal de la suture est la caractère distinctif de cette espèce."

The above mentioned examples from Parada certainly represent a distinct species, which may be known from *P. rotundatum* by its flatter and more parallel form; the head slightly shining, and finely, evidently, but not closely punctured; the antennæ ferruginous, the four or five outer joints slightly darker; the anterior margin of the thorax distinctly bisinuate; the elytra somewhat depressed, and finely and shallowly punctate-striate, the punctures not closely placed. If it should prove to be not identical with *P. angulatum*, the species might be called *sallæi*.

In these examples I fail to detect any distinct difference in the sutural angle of the elytra (the chief character for *P. angulatum*, according to the describer) between this and the allied species.

9. **Platydema subquadratum.**

Neomida subquadrata, Motsch. Bull. Moscou, xlvi. pt. 1, p. 477 (1873)[1].

Platydema ventrale, Chevr. Petites Nouv. Ent. ii. p. 186 (1877)[2].

Platydema janus, Horn, Rev. Ten. of Am. north of Mexico, p. 382[3] (nec Fabr., and Lap. & Brullé).

Platydema pernigrum, Casey, Contrib. to the descriptive and systematic Coleopterology of North America, part i. p. 49 (1884)[4]; Horn, Entom. Americana, i. pp. 111, 113.

Hab. North America, Southern States [3], Arizona [4].—Mexico, Presidio (*Forrer*), Vera Cruz, Cosamaloapam (*Sallé* [2]), Jalapa (*Höge*); British Honduras, R. Sarstoon, R. Hondo (*Blancaneaux*); Guatemala, Zapote, San Gerónimo, San Joaquin, Chacoj (*Champion*); Nicaragua, Granada (*Sallé*); Central America [1].

A common species in Mexico and Guatemala, extending northwards into California, Arizona, and New Mexico, and southwards to Nicaragua.

P. subquadratum may be known amongst its allies by the closely punctured head,

the regular and distinct punctuation of the thorax, and the somewhat depressed and subquadrate form; the antennæ with the three or four basal joints, and the apical one, red; the upper surface dull velvety-black, opaque; the epipleuræ, legs, and under surface pale ferruginous; the head similar in both sexes; fresh examples have the upper surface evidently pruinose; varying in size from 4–7 millimetres; the sides of the thorax are slightly rounded in some examples, in others almost straight.

I have examined a typical example of *P. ventrale* and see no reason for separating it from *P. subquadratum*. American entomologists refer this insect to *P. janus* (Fabr.) Lap. & Brullé, on, it seems to me, very questionable authority. An example before me, contained in Mr. F. Bates's collection, named as above by Dr. Horn, is identical with our Central-American insect. It seems to me more than probable that *P. janus*, Fabr., from South America, represents another species, and is possibly (to judge from the description) the insect here referred to *P. sobrinum*; *P. janus*, Lap. & Brullé, is from Peru. *P. subquadratum* does not, so far as I am aware, extend south of Nicaragua; in the State of Panama it is replaced by *P. sobrinum*. Numerous allied species with similarly coloured antennæ are now known, and in the absence of further evidence I prefer not to refer either of our Central-American insects to *P. janus*.

10. **Platydema sobrinum.**

Platydema sobrinum, Chevr. Petites Nouv. Ent. ii. p. 186 (1877)[1].
?*Neomida discolor*, Motsch. Bull. Moscou, xlvi. pt. 1, p. 477 (1873)[2].
?*Platydema* (*Mycetophagus*) *janus*, Fabr. Syst. Eleuth. ii. p. 566[3] (nec Horn, Lap. & Brullé).

Hab. Mexico (*Stark*[1]), Cordova (*Sallé*), Jalapa (*Höge*); British Honduras, R. Sarstoon (*Blancaneaux*), Belize (*Blancaneaux, coll. F. Bates*); Guatemala, Cahabon, Zapote, El Tumbador (*Champion*); Nicaragua, Chontales (*Belt, Janson*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).—? South America[3].

A variable and somewhat puzzling species, abundant throughout our region. Rather more convex and more ovate than *P. subquadratum*, the upper surface smoother, the thorax not very distinctly punctured, the elytra more finely and shallowly punctate-striate.

In some examples the elytra are much more finely punctate-striate than in others. The antennæ, as in *P. subquadratum*, usually have the four or five basal joints, and the apical one, rufous or ferruginous.

The two individuals from Belize have the antennæ rather shorter, with the penultimate joints more transverse, than examples from the other localities; they cannot, however, be satisfactorily separated from *P. sobrinum*. I have determined this species from typical examples (named by Chevrolat himself) contained in Mr. F. Bates's collection.

It is not improbable that *Neomida discolor* and *N. texana*, Motsch., are identical with

P. sobrinum, Chevr.: *N. discolor* is recorded from "Brésil, de Vénézuela et jusq'au Texas"[2]; *N. texana* from Texas.

11. Platydema ferrugineum.

Platydema ferrugineum, Chevr. Petites Nouv. Ent. ii. p. 186[1].
Platydema bi-impressum, Chevr. loc. cit. p. 214[2].

Hab. Mexico[1 2] (*coll. F. Bates*), Toxpam, Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Capetillo, Las Mercedes (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

Determined from typical examples in Mr. F. Bates's and M. Sallé's collection.

This is another variable and rather puzzling species; oblong ovate in form, moderately convex, the upper surface uniform dark ferruginous, sometimes almost black. From the numerous opaque velvety-black species it may be known by its comparatively elongate form, and long legs and antennæ; it varies in size from 6–9 millimetres. The four examples from Guatemala and the State of Panama are rather more convex, and have the elytral striæ more deeply impressed, than numerous individuals from Mexico.

12. Platydema fuliginosum.

Platydema fuliginosa, Lap. & Brullé, Ann. Sciences Nat. xxiii. p. 374[1].

Hab. Mexico[1].

I am unable to satisfactorily identify this species, the only one of the genus ascribed to our country by Laporte and Brullé, among the very large number of specimens before me: it is more than probable, however, that it represents one or the other of the species here enumerated. To judge from the description, *P. fuliginosum* should be nearest to *P. subquadratum*, though no mention is made of the pale apical joint to the antennæ.

13. Platydema melancholicum.

Ovate, rather broad, moderately convex, black, opaque. Head slightly shining, transversely impressed in front, finely and closely punctured, the epistoma defined by a fine shallow impressed line, the anterior margin red; palpi piceous; antennæ short, about reaching to the base of the prothorax, the seventh to the tenth joints broad and transverse, the two basal joints, the third joint, and the extreme apex indistinctly, red, the rest black; prothorax transverse, the sides scarcely rounded and converging from the base, the base (feebly) and apex bisinuate, the anterior angles obtuse, the surface (if viewed with a lens) exceedingly finely and rather closely punctured; scutellum large, scutiform; elytra a little wider than the prothorax at the base, feebly rounded at the sides, regularly punctate-striate (the punctures deeply impressed and towards the sides placed not very close together), the interstices smooth; legs red, the tibiæ slightly infuscate; beneath (and the epipleuræ) shining, reddish brown.
Length $4\frac{3}{4}$–5 millim.

Hab. Guatemala, San Joaquin (*Champion*).

Two examples. Comparatively shorter and broader than *P. subquadratum*; of the

size of the smallest individuals of that species, from which it is distinguished by the differently formed antennæ, and the deeper and coarser punctures of the elytral striæ.

14. Platydema rotundatum.

Platydema rotundatum, Chevr. Petites Nouv. Ent. ii. p. 186 [1].

Hab. MEXICO [1] (*coll. F. Bates*), Jalapa, Vera Cruz, Esperanza (*Höge*), Playa Vicente, Cordova (*Sallé*); GUATEMALA, Dueñas, Zapote, Cerro Zunil, San Gerónimo (*Champion*).

Many examples. In Mr. F. Bates's collection two perfectly distinct species are each labelled (apparently in Chevrolat's handwriting) "*P. rotundatum*, Chevr., type": one from Mexico, agreeing with our species and with the description; the other from Parà and differing in having much larger and more oblique eyes, &c. *P. rotundatum* may be known from the allied species by its short broad form, rounded sides, and the fine and lightly impressed elytral striæ; the antennæ are usually reddish-piceous, in some examples, however, the last three or four joints are darker; in the male the posterior tibiæ are slightly sinuous and widened from the middle to the apex; it varies in size from 5–8 millimetres.

15. Platydema rugiceps.

Rotundate ovate, convex, velvety-black, opaque. Head broad, short, subrugose, shining, the epistoma well-defined at the sides and posteriorly by a shallow but distinct groove, the eyes widely separated; antennæ dark ferruginous, the two or three basal joints, and the extreme apex, slightly paler; prothorax broad, strongly transverse, the sides slightly rounded and converging from the base, the base (strongly) and apex bisinuate, the anterior angles slightly prominent but obtuse, the surface smooth; scutellum rather large, triangular; elytra the width of the prothorax at the base, narrowly margined, strongly rounded at the sides, widest before the middle, somewhat acuminate behind, very shallowly and finely punctate-striate (the punctures not very closely placed), the interstices smooth; legs and epipleuræ reddish brown; beneath reddish brown, shining, sparingly and finely punctured.

Length $6\frac{1}{2}$-$7\frac{1}{4}$ millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Cahabon (*Champion*); NICARAGUA, Chontales (*Belt, in coll. F. Bates*).

The rotundate form, and the shining and rugose head, will readily distinguish this species amongst its allies; from *P. rotundatum* it may be known by the broader and differently sculptured head, and the elytra more acuminate behind; and from *P. globatum*, Lap. & Brullé, from Brazil, by the darker antennæ, larger head, &c. A closely allied undescribed species is found at Chanchamayo, Peru.

The four examples before me have the hind tibiæ similarly formed, and without curvature or narrowing at the base; possibly they are all females.

16. Platydema oculatum.

Subrotundate ovate, convex, dark reddish brown, opaque. Head slightly shining, the frontal half red, very finely and sparingly punctured, with a shallow impression on each side before the eyes, the epistoma defined by a fine impressed line; eyes large, oblique, not widely separated; prothorax transverse, the

sides slightly rounded and converging from the base, the apex broadly but not deeply arcuate-emarginate, the anterior angles obtuse and not prominent, the base very deeply bisinuate, the hind angles produced behind and slightly overlapping the elytra, the surface almost smooth; scutellum triangular; elytra a little wider than the prothorax at the base, rounded at the sides, widest about the middle, regularly punctate-striate (the punctures shallow and closely placed), the interstices smooth, a little darker in colour than the prothorax; legs and antennæ (entirely) light ferruginous; beneath (and the epipleuræ) reddish brown, shining, very sparingly and finely punctured; legs rather slender; posterior tibiæ in the male thin towards the base, slightly widened on their inner side from the basal fourth to the apex.

Length $4\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*).

Two examples. Of the size of the North-American *P. ruficorne*, but of the shape of *P. nicaraguense*; from the last named species *P. oculatum* may be known by its very much smaller size, differently formed head and eyes, and the produced hind angles of the thorax. The hind tibiæ in the male are formed as in *P. rotundatum*.

17. Platydema nicaraguense.

Subrotundate ovate, convex, dark reddish brown, opaque. Head (comparatively) coarsely rugulose, slightly shining, the epistoma well-defined at the sides and posteriorly by a distinctly impressed groove; eyes narrow, strongly oblique, large, and extending inwards; prothorax transverse, the sides slightly rounded and converging from the base, the apex feebly arcuate-emarginate, the anterior angles rounded and not prominent, the base strongly bisinuate, the surface almost smooth, reddish brown, here and there indistinctly infuscate; scutellum triangular, reddish brown; elytra a little wider than the prothorax at the base, distinctly margined, the sides rounded, finely punctate-striate (the punctures approximate, the striæ more deeply impressed towards the apex), the interstices smooth, dull dark brownish black, the base narrowly reddish brown, distinctly pruinose; epipleuræ, legs, the antennæ (entirely), and beneath, rather light ferruginous; legs finely setose, the tibiæ rough; beneath shining, very evidently and rather closely punctured.

Length $7\frac{1}{2}$–$7\frac{3}{4}$ millim.

Hab. Nicaragua, Chontales (*Belt*).

Two examples. Comparatively less rotundate than *P. rugiceps*, of a peculiar reddish-brown tint, the head rugulose, the elytra evidently pruinose, the legs and antennæ entirely ferruginous; of described species it is nearest allied to *P. globatum*, Lap. & Brullé, from Brazil.

18. Platydema immaculatum.

Ovate, convex, ferruginous, opaque. Head slightly shining, closely and finely punctured, transversely impressed in front, the epistoma well-defined at the sides and posteriorly by a rather deep groove; antennæ comparatively short, stout, the three basal joints, and the extreme apex (indistinctly), red, the rest black, joints 7–10 strongly transverse; prothorax transverse, the sides feebly rounded and converging from the base, the apex broadly and somewhat deeply emarginate, the anterior angles obtuse and rather prominent, the base bisinuate and with a narrow very oblique impression on each side, the surface smooth; scutellum large, triangular; elytra feebly rounded at the sides, scarcely wider than the prothorax at the base, widest about the middle, regularly punctate-striate (the punctures rather coarse and deep, and not very closely placed), the interstices smooth; palpi and legs red, the tibiæ rough, and setose on their outer edge; beneath ferruginous, shining.

Length $5\frac{1}{2}$–7 millim.

Hab. Panama, Volcan de Chiriqui, David (*Champion*).

Two examples. In this species the entire upper surface is of a dull ferruginous colour, without spots or markings. *P. immaculatum* is perhaps nearest allied to *P. sexnotatum*, but is shorter and more ovate in form, the elytra without spots, &c.

19. **Platydema diophthalmum.** (Tab. VIII. fig. 16.)

Platydema diophthalma, Lap. & Brullé, Ann. Sciences Nat. xxiii. p. 383 [1].
Platydema luna, Chevr. Petites Nouv. Ent. ii. p. 186 [2].

Hab. MEXICO [2] (*coll. F. Bates*), Ventanas (*Forrer*), Cordova (*Sallé*), Jalapa (*Höge*); BRITISH HONDURAS, Belize (*coll. F. Bates, Blancaneaux*), R. Sarstoon (*Blancaneaux*); GUATEMALA, El Reposo, Capetillo, Zapote, San Gerónimo, San Juan in Vera Paz (*Champion*); NICARAGUA, Chontales (*Belt, Janson*); PANAMA, Volcan de Chiriqui, Bugaba (*Champion*).—ANTILLES, Cuba [1] (*coll. F. Bates*).

A common species throughout the forest-region of Central America. I fail to detect any difference between *P. luna*, the type of which is before me, and *P. diophthalmum*. A large dull black species, each elytron with a large rounded transverse red spot near the base. I met with *P. diophthalmum* in great abundance about fungoid growth on fallen trees in the low forest-region west of Bugaba, and also not uncommonly in various parts of Guatemala.

An example from R. Sarstoon is figured.

20. **Platydema bimaculatum.**

Platydema bina, Dcyr. in litt.

Size and form of *P. diophthalmum*, and differing as follows:—the head smoother and much more finely punctured; the prothorax widest a little before the base, the sides more rounded behind, the hind angles in consequence more obtuse, the surface almost smooth; the elytra more finely and shallowly punctate-striate, the red spot placed at the middle (not near the base as in *P. diophthalmum*); the penultimate joints of the antennæ less transverse; the rest as in *P. diophthalmum*.
Length 6–8 millim.

Hab. MEXICO, Cordova, Tuxtla, Toxpam (*Sallé*), Jalapa (*Höge*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, San Juan in Vera Paz (*Champion*); NICARAGUA, Chontales (*Belt, coll. F. Bates*); PANAMA, Volcan de Chiriqui (*Champion*).—GUIANA, Cayenne.

Generally distributed throughout our region, but not quite so common as *P. diophthalmum*, and often captured in company with that species, from which it may be known by the red spot on each elytron being placed further back and at the middle of each, as well as by other characters.

21. **Platydema fasciatum.**

Mycetophagus fasciatus, Fabr. Syst. Eleuth. ii. p. 367.
Platydema fasciatum, Lap. & Brullé, Ann. Sciences Nat. xxiii. p. 382 [1].
Diaperis fasciata, Dej. Cat. 3rd edit. p. 68.

Hab. Mexico, Cordova (*Sallé*), Jalapa, Esperanza (*Höge*); British Honduras, Belize (*Blancaneaux*); Guatemala, Balheu, Cubilguitz (*Champion*).—Colombia, Bogota (*coll. F. Bates*); Guiana, Cayenne [1]; Amazons, Santarem.

A common species in Mexico. Smaller and narrower than *P. bimaculatum*, the head closely and rather coarsely punctured; the thorax distinctly but finely punctured; the striæ of the elytra more deeply impressed, the punctures much coarser; in size varying from 4–5 millimetres.

22. **Platydema submaculatum.**

Platydema submaculatum, Chevr. Compt. Rendus de la Soc. Ent. Belg. xxi. p. xeix [1].

Hab. Mexico, Esperanza, Jalapa (*Höge*); British Honduras (*Blancaneaux*).—? Brazil [1].

In Mr. F. Bates's collection two distinct species are each labelled, in Chevrolat's handwriting, *P. submaculatum*, and marked "type"; one of these, from Santarem, Brazil, does not differ from *P. fasciatum*, Fabr.; the other, without locality, agrees more nearly with the description of *P. submaculatum*, and with our Central-American species. In the specimen without locality the elytra are distorted and apparently immature, the red discoidal spots of the elytra appearing on one side only. Chevrolat himself suggests that *P. submaculatum* may possibly be only a variety of *P. fasciatum*; but in the latter specimen, as in our species, the head is shining and very much more coarsely punctured, the thorax more evidently punctured, and the transverse red spot on each elytron placed (as described by Chevrolat), if anything, a little before the middle. The elytral spots vary a good deal in size in the twenty examples before me, but do not, as in *P. transversum*, show a tendency to form broad transverse or oblique bands. The size varies from $4\frac{1}{4}$–$5\frac{1}{2}$ millimetres. This species bears much the same relation to *P. fasciatum* as does *P. diophthalmum* to *P. bimaculatum*.

23. **Platydema transversum.** (Tab. VIII. fig. 17.)

Platydema transversum, Lap. & Brullé, Ann. Sciences Nat. xxiii. p. 381 [1].

Hab. Panama, Volcan de Chiriqui (*Champion*).—Colombia[1], Cartagena (*coll. F. Bates*); Amazons, Parà, Ega, Santarem.

Three examples from Chiriqui are apparently referable to this species; these agree very nearly in the maculation of the elytra with some of the specimens (from Balheu) referred to *P. fasciatum*. The red elytral bands, however, in the Chiriqui examples are united at the suture and much more sharply defined, extending angularly forwards near the middle and posteriorly along the suture; the striæ are more deeply impressed, the punctures coarser and more distant one from another.

24. **Platydema bisignatum.** (Tab. VIII. fig. 18.)

Platydema bisignatum, Chevr. Petites Nouv. Ent. ii. p. 181 [1].

Hab. MEXICO (*Sallé*); GUATEMALA, Capetillo 3000–5000 feet, San Gerónimo (*Champion*).—COLOMBIA, Cartagena [1] (*coll. F. Bates*).

This species will be easily recognized from our figure, which is taken from an example from Capetillo.

Central-American specimens agree with the Colombian type, except that they have the elytra more finely and rather more shallowly punctate-striate, the punctures placed closer together; but in a long series of examples I find considerable variation in this respect. *P. erythropterum* *, Chevr., from Bogota, is allied to this species, the elytra being similarly coloured, but at once separated by the very coarsely punctate-striate elytra (the punctures distant one from another) and convex interstices.

I found *P. bisignatum* in large numbers on the forest-clad slopes of the Volcan de Fuego in the vicinity of the sugar-plantation of Capetillo; one or two examples only from the other localities.

25. **Platydema högei.** (Tab. VIII. fig. 19.)

Elongate ovate, moderately convex, deep black, opaque. Head shallowly, finely, and closely punctured, the anterior half red, the epistoma well-defined posteriorly by a transverse impression; antennæ black, the three or four basal joints, and the outer half of the apical one, red, joints 7–10 transverse; last joint of the maxillary palpi securiform; prothorax narrowing from the base, the sides feebly rounded (in some examples almost straight), the apex deeply emarginate, the anterior angles prominent, obtuse, the base strongly bisinuate, the surface shallowly, finely, and evidently punctured (a little more diffusely than the head); elytra long, regularly punctate-striate (the punctures shallow, and not closely placed), the interstices smooth, with a broad transverse subangular red band (not reaching the suture or outer margin) on each side before the middle, and a still broader but oblique red band (starting from the outer margin and confluent with the other at the suture) on each side some distance before the apex, in some examples the outer margin from the second band to the extreme apex also red; legs piceous, the tarsi and knees lighter; beneath shining, sparingly and rather coarsely punctured, the ventral surface at the sides longitudinally wrinkled and irregularly punctured.

Length 6–8 millim.

Hab. MEXICO (*Sallé*), Jalapa, Esperanza (*Höge*).

Captured in abundance by Herr Höge at Jalapa. Allied to *P. maculosum*, Lap. & Brullé, from Brazil, but with the second band on the elytra placed some distance before the apex (not at the apex itself, as in that species), &c.

26. **Platydema monilicorne.**

Platydema monilicorne, Chevr. Petites Nouv. Ent. ii. p. 186 [1].

Hab. MEXICO [1].

Unknown to me. The following is the description:—"Oblongum, convexum;

* M. Chevrolat (op. cit. p. 187, nota) states that this species is also found in Mexico, but probably in error for the allied *P. bisignatum*.

antennis moniliformibus, piceis, articulis 3bus primis ferrugineis, 3° longiore, ultimo globoso, ultra basin prothoracis projectis; supra atrum, opacum; epipleuris, coxis anticis pedibusque rubris; pectore piceo, abdomine rufescente; capite antice truncato, in margine rubro, inter oculos tenue sulcato; prothorace transverso, supra scutellum late modiceque rotundato, angulis posticis rectangulis; scutello trigono; elytris obsolete sulcatis, rubido nebulosis. Long. 8 millim., lat. 4 millim.—Mexico. Unicum."

"C'est l'une des plus grandes et la plus allongée de ce groupe."

27. **Platydema sexnotatum.** (Tab. VIII. fig. 20.)

Platydema sexnotatum, Chevr. Petites Nouv. Ent. ii. p. 194[1].

Hab. Mexico[1] (*coll. F. Bates*), Cordova (*Sallé*), Jalapa (*Höge*); Nicaragua, Chontales (*Belt*).

This species will be readily identified by its ferruginous colour and elytral markings; it varies in size from $5\frac{3}{4}$–7 millim. *P. sexpunctatum*, Chevr. (*op. cit.* p. 181), from Bogota, judging from the description, though apparently smaller ($4\frac{1}{2}$ millim.), must be very closely allied to, if not identical with, this species; if this should prove to be the case, the name *sexnotatum* will have to be changed.

An example from Cordova is figured.

28. **Platydema sexmaculatum.**

Platydema sexmaculatum, Chevr. Petites Nouv. Ent. ii. p. 194[1].

Hab. Mexico (*Stark*)[1].

Unknown to me. This species is apparently allied to *P. sexnotatum*; the following is the description:—"Oblongum, convexum, ferrugineum; prothorace transverso, nigro, holosericeo; elytris sanguineis, singulo: punctis tribus nigris 1–2, ante medium sitis, punctato-striatis; capite rufescente, antice subrotundato, labio, ore, antennis (fuscis) articulis quatuor ultimoque apice, epipleuris, corpore infra pedibusque rubris. Long. $5\frac{1}{2}$ millim., lat. $3\frac{1}{3}$ millim.—Mexico. Unicum; a D. Stark missum."

29. **Platydema fasciatocolle.**

Platydema fasciatocolle, Chevr. Petites Nouv. Ent. ii. p. 194[1].

Hab. Mexico (*Stark*[1]).

Unknown to me. "Ovali-elongatum, convexum, rubro-tomentosum, in prothorace fascia media, apicibus abbreviata; scutello triangulari, rubro; elytris punctato-striatis, nigris, in basi longe suturam, singulo: lineolis 3 mediis, macula apicali obliqua, fasciis duabus, una ante, altera post medium, rubris vel flavis. Long. 5–$5\frac{3}{4}$ millim., lat. $2\frac{1}{2}$–$2\frac{3}{4}$ millim.—Mexico. 2 exempl.; a D. Stark missa."

30. **Platydema guatemalense.** (Tab. VIII. fig. 21.)

Broad ovate, convex, dull reddish testaceous. Head shining, coarsely and closely punctured, the basal half piceous, the rest red, the epistoma defined by a shallow groove; antennæ with joints 7–10 strongly transverse, the four basal joints testaceous, the others slightly darker; maxillary palpi testaceous, the last joint broadly triangular; prothorax narrowing from the base, the sides feebly rounded, the anterior angles obtuse and almost rounded, the apex scarcely emarginate, the base strongly bisinuate, almost smooth, opaque, reddish testaceous, marked with black, thus:—a broad irregular subtriangular mark before the middle, and a small transverse mark on each side of the disc before the base, and on either side externally a crescent-shaped spot; scutellum triangular, red; elytra a little broader than the prothorax at the base, slightly rounded at the sides, regularly punctate-striate (the punctures shallowly impressed, fine, and closely placed), the interstices smooth and almost flat, opaque, the entire surface about equally variegated with interrupted longitudinal black and sordid yellow streaks, the suture and margins and the epipleuræ reddish; legs reddish testaceous, the tibiæ more or less infuscate; beneath shining, reddish brown, the flanks of the prothorax testaceous.

Length $5\frac{3}{4}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

One example. Not nearly allied to any known species.

31. **Platydema ornatum.** (Tab. VIII. fig. 22.)

Platydema ornatum, Chevr. Petites Nouv. Ent. ii. p. 186 (sp. no. 45)[1].

Hab. MEXICO[1] (*coll. F. Bates*), Cordova (*Sallé*).

This distinct species will be readily identified from our figure, which is taken from a typical example from Cordova.

32. **Platydema pretiosum.** (Tab. VIII. fig. 23.)

Ovate, strongly convex, reddish testaceous, opaque. Head slightly shining, red, finely, very closely, and almost confluently punctured, broadly impressed transversely in front, the antennary orbits swollen and reflexed; antennæ stout from the base, black, the five basal joints, and the outer half of the apical one, testaceous, joints 7–10 transverse; maxillary palpi testaceous, the last joint triangular; prothorax short, broad, transversely convex, the sides rounded and narrowing very little anteriorly, the apex arcuate emarginate, the anterior angles rounded, the base very strongly bisinuate, closely embracing (and towards the sides almost appearing to overlap) the elytra, smooth, the disc with a short black line towards the base and an oblique black stripe on each side (not reaching the basal or apical margin), midway between which and the lateral margin is a much smaller longitudinal black spot; elytra the width of the prothorax at the base, the sides almost straight from the base to the middle, thence narrowing to the apex, regularly punctate-striate (the punctures fine, shallow, and closely placed), the interstices smooth and flat, sordid yellow, each elytron marked with four large black spots—one near the base (broad, emarginate anteriorly), two about the middle (longitudinal in form, the inner one distant from the suture, the outer one not quite reaching the lateral margin), and one (irregular, and placed near the lateral margin) some distance before the apex, the base also, towards the sides, slightly marked with black, the suture broadly, the lateral margin narrowly, and the epipleuræ, dull red; legs testaceous; beneath reddish brown, shining.

Length $4\frac{1}{2}$ millim.

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*).

One example. I can suggest no near ally to this prettily marked species.

33. **Platydema panamense.** (Tab. VIII. fig. 24.)

Ovate, strongly convex, dark ferruginous, opaque. Head broad, dull red, very shallowly, finely, and confusedly punctured (when seen under a strong lens), the epistoma well defined posteriorly and at the sides by a distinct groove; antennæ with the four basal joints, and the apical one entirely, red, the rest black, joints 9 and 10 transverse; prothorax strongly transverse, the sides slightly rounded and quickly converging from the base, the base (feebly) and apex bisinuate, the anterior angles obtuse, smooth, red, with a broad transverse black band (extending nearly to the lateral margins) in the middle; scutellum triangular, red; elytra convex, scarcely wider than the prothorax at the base, rounded at the sides, somewhat coarsely punctate-striate (the punctures distant one from another), the interstices smooth, black, with two strongly angulated zigzag transverse bands (one, before the middle, starting from a little below the shoulders, extends to the second interstice, where, turning abruptly, it is continued in a straight line to the base, the other, beyond the middle, starts from the lateral margin and ends abruptly in the second interstice) and the apex reddish testaceous, the suture (from the base to the apex) and the lateral margins (and epipleuræ) reddish brown; legs red; beneath reddish brown, slightly shining.

Length $4\frac{3}{4}$–$5\frac{1}{4}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Five examples. This species somewhat resembles *P. undatum*; it is, however, more convex than that species; the head is broader, and not excavate in the male; the prothorax and elytra differently marked, the base of the latter (except near the suture) black, &c.

34. **Platydema tibiale.** (Tab. VIII. fig. 25.)

Platydema tibiale, Chevr. Compt. Rendus de la Soc. Ent. Belg. xxi. p. cxlviii [1].

Hab. Nicaragua, Chontales (*Belt, Janson, coll. F. Bates*); Panama, Bugaba (*Champion*).—Amazons, Ega [1] (*coll. F. Bates*).

I am unable to detect any difference of importance between specimens from the Amazons and others from Central America; these latter have the elytra more distinctly marked with red and the subapical spots more or less confluent, while in others from Ega these spots are sometimes entirely absent. In some examples the thorax is distinctly suffused with red on each side, and the sides more rounded than in others: the latter is possibly a sexual character.

A specimen from Chontales is figured.

35. **Platydema 15-maculatum.** (Tab. VIII. figg. 26, 27.)

Platydema 15-*maculatum,* Chevr. Compt. Rendus de la Soc. Ent. Belg. xxi. p. cxlix [1].

Hab. Guatemala, Panzos (*Champion*); Nicaragua, Chontales [1] (*coll. F. Bates, Belt, Janson*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).—Amazons, Parà, Tocantins (*coll. F. Bates*).

Numerous examples. In a variety from Chontales (*Belt*) the elytra have the lateral margins and the suture to the apex (as well as the base, narrowly) black; the two inner spots of the first band smaller than in the type; the spots of the second band confluent and forming a broad transverse angular band, extending inwardly to the

suture and outwardly to the lateral margins; the apical spots large, and forming a broad apical patch angulated on its anterior edge.

A single example from the Polochic valley in Guatemala differs from the type in having the elytra red to the base, the spots forming the second band united into one large spot (not reaching the suture or lateral margins), and the thorax with a distinct transverse red band about the middle, not reaching the lateral margins. The two individuals from Bugaba resemble the above mentioned variety from Chontales in the markings of the elytra (in one, however, the second band does not reach the sutural stripe), but are considerably smaller in size than any of the other examples before me.

Evidently a variable species as regards the coloration of the thorax and elytra and size (7–9 millim.). Examples from our country agree very well with others collected by Mr. H. W. Bates on the Amazons.

We figure two specimens from Chontales.

36. **Platydema nigromaculatum.** (Tab. IX. figg. 1, 2.)

Black, short, broad ovate, convex, dull. Head distinctly and rather closely punctured, the labrum and eyes sometimes reddish; prothorax reddish testaceous, the anterior margin with a triangular black mark on each side (connected by a narrow marginal line) just behind the eyes, the disc with a long subtriangular black mark on each side, extending from the base to beyond the middle, and connected posteriorly by a broadish basal band, the black basal band not reaching the lateral margins and often narrowly produced in the middle anteriorly; scutellum black; elytra regularly and somewhat deeply punctate-striate, the interstices (if viewed laterally) appearing feebly convex, and with indications (especially towards the apex) of transverse darker markings, reddish testaceous, with numerous black markings arranged thus:—a narrow subtriangular mark at the base on each side (forming a continuation of the marks on the base of the prothorax), two rounded marks (placed transversely) on each side before the middle, a large broad zigzag band a little behind the middle (not reaching the lateral margins, but usually connected at the suture), and an elongate mark on each side before the apex, the suture also narrowly black nearly to the apex; antennæ and legs black, the knees sometimes narrowly reddish; beneath sparingly and finely punctured, black, the flanks of the prothorax and the epipleuræ testaceous; mesosternum with a very prominent V-shaped elevation, the prosternum strongly produced.

Length 6–6½ millim., breadth 3¾–4¼ millim.

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Var. The black spots on the anterior margin of the prothorax obsolete, the others reduced to longitudinal streaks not connected along the base; the zigzag band on the elytra reduced to a large angular spot, or to two longitudinal streaks, distant from the suture, the suture itself not margined with black.

Hab. Nicaragua, Chontales (*Belt*, *Janson*).

Numerous examples of the type, five of the variety. Allied to *P. ornatum*, Chevr., but comparatively broader and shorter; the elytra less attenuate posteriorly, and somewhat differently marked, the lateral margins not black, the suture more narrowly margined with black; the femora and abdomen wholly black.

We figure two examples: one (fig. 1) a typical individual from the Volcan de Chiriqui, the other (fig. 2) the variety from Chontales.

37. **Platydema breve.** (Tab. VIII. fig. 28.)

Broad ovate, short, convex, dark reddish ferruginous, opaque. Head short, broad, dull, exceedingly finely and closely punctured (when seen under a strong lens), the epistoma defined posteriorly by a shallow transverse groove; antennæ rather short, stout, the four basal joints, and the outer half of the apical one, red, the rest black, joints 7–10 broad and transverse; prothorax short, broad, the sides feebly rounded and converging from the base, the base and apex bisinuate, the anterior angles prominent and obtuse, smooth, reddish ferruginous, the disc more or less transversely infuscate; scutellum triangular; elytra short, rounded at the sides, regularly punctate-striate (the punctures coarse, shallow, and, towards the sides, distant one from another), the interstices smooth, brownish black, with two curved, interrupted, zigzag, transverse, reddish testaceous bands (one before, the other beyond the middle), the base (and scutellum), the suture broadly, the lateral margins, and (usually) the whole of the apex from the second band, reddish brown; legs red; beneath reddish brown, shining, finely and sparingly punctured.

Length 4¾–5 millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Cubilguitz, Cahabon (*Champion*); Panama, Bugaba (*Champion*).

Seven examples. A broad oval, short, convex species, with stout antennæ; the head similarly formed in both sexes; dark reddish ferruginous in colour, and opaque; the elytra marked much as in *P. rodriguezi.*

P. breve is apparently not nearly allied to any other described species; it is apparently widely distributed.

The specimen figured is from Cubilguitz.

38. **Platydema versicolor.** (Tab. IX. fig. 3.)

Platydema (?) *versicolor,* Chevr. Petites Nouv. Ent. ii. p. 194[1].

Hab. Mexico[1] (*coll. F. Bates*), Cordova (*Sallé*), Jalapa, Esperanza (*Höge*).

Many specimens of this pretty species were captured by Herr Höge near Jalapa; one of these is figured.

39. **Platydema tricolor.** (Tab. IX. fig. 4.)

Bright reddish brown, broad ovate, convex, shining. Head sparingly but somewhat coarsely punctured; prothorax sometimes indistinctly darker in the middle; elytra black, the base narrowly, a transverse angular band, placed a little before the middle, and extending from the lateral margins to the second dorsal stria, and a similar but shorter band behind the middle, yellowish testaceous, the extended lateral margins, the apex, and sometimes the apical half of the suture, reddish brown, regularly and deeply punctate-striate (the punctures comparatively rather coarse), the interstices flat and very evidently though sparingly punctured; the three basal (and part of the fourth) joints of the antennæ, and the outer half of the apical one, and the legs, red.

Length 5¼–6 millim.

Hab. Guatemala, San Gerónimo, Purula (*Champion*).

Numerous examples. Allied to *P. versicolor,* but easily separated from that species by the unicolorous thorax and the more coarsely punctate-striate elytra, the base of the latter being narrowly testaceous.

40. **Platydema biplagiatum.** (Tab. IX. figg. 5, 6.)

Oblong ovate, moderately convex, dark reddish brown, shining, glabrous. Head shallowly, confusedly, and somewhat coarsely punctured, the epistoma not clearly defined, the frontal half red; antennæ with the three or four basal joints, and the outer half of the apical one, red; prothorax broader than long, the sides strongly margined, rounded, and rapidly narrowing from the middle, the anterior angles broadly rounded and not prominent, the apex almost truncate, the base bisinuate and with a distinct oblique fovea on each side, the surface very finely, shallowly, and diffusely punctured, black, the sides and base more or less reddish; elytra a little wider than the prothorax at the base, strongly margined, feebly rounded at the sides, regularly punctate-striate (the punctures deep, rather coarse, and not very closely placed), the interstices flat and very finely and sparingly punctured, black, with two bright reddish-testaceous broad angular bands—one, starting from the lateral margin a little below the shoulder, extends transversely inwards to the second interstice, where it turns abruptly upwards and is continued to the base, the other some distance beyond the middle, transverse, not reaching the suture, and ending abruptly on the second interstice (in some examples continued along the lateral margin and second interstice to the apex, enclosing a large black spot)—the apex also reddish testaceous; legs red, the tibiæ more or less infuscate; beneath shining, finely and sparingly punctured.

Length 4¾–6 millim.

Hab. Mexico, Cordova (*Sallé*, *Höge*), Jalapa (*Höge*).

Captured in plenty by Herr Höge at Jalapa.

Var. *a*. The prothorax, except the centre of the disc, red; elytra with the first band narrower, more curved, and less angular, the apical third reddish testaceous, enclosing a large oblique black spot on each, the extreme base narrowly, the reflexed lateral margins, and the suture, red.

Hab. Nicaragua, Chontales (*Belt*). Two examples.

Var. *b*. The first band of the elytra as in var. *a*, but not extending to the base, the second band well defined (as in the type), the apex red.

Hab. Panama, Bugaba (*Champion*). Six examples.

A bright, shining, ovate, moderately convex species; the elytra with two transverse angular reddish testaceous bands; not closely allied to any previously described. I do not consider the varieties *a* and *b* to represent more than local races of this somewhat variable insect. In some examples the elytra are more broadly margined than in others; in one, from Jalapa, the first and second elytral bands are connected externally by a broad extension of the reddish testaceous colour; the amount of this colour on the elytra varies considerably in the long series of specimens before me.

We figure a typical example (fig. 5) from Jalapa, and one of var. *a* (fig. 6) from Chontales.

41. **Platydema maculipenne.**

Rather longer and narrower than *P. biplagiatum*; the head more coarsely and not so closely punctured, the epistoma defined posteriorly by a shallow transverse groove; the antennæ wholly red; the prothorax more evidently punctured, red, the disc more or less broadly infuscate; the elytra more parallel, less acuminate behind, more shallowly punctate-striate (the punctures placed closer together), the interstices more evidently punctured, black, with two curved transverse angulated bands (one, before the middle, not reaching the suture, and sometimes extending forwards to the base, the other some distance beyond the

middle) and the apex reddish testaceous, the lateral margins, epipleuræ, suture (and scutellum) red; legs red; beneath shining, very sparingly and finely punctured.
Length 6–6½ millim.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Cerro Zunil (*Champion*).

Four examples. Allied to *P. biplagiatum*, but readily distinguished by the entirely red antennæ and other characters given above.

42. **Platydema dimidiatum.** (Tab. IX. fig. 7.)

Platydema (?) *dimidiatum*, Chevr. Petites Nouv. Ent. ii. p. 194[1].

Hab. MEXICO[1], Cordova (*Sallé*).

The following are varieties of this species:—

Var. *a.* The broad transverse black band a little beyond the middle of the elytra not reaching the suture, and in the form of a large separate spot on each; the subapical patch in the form of an oblique stripe (united at the suture behind) parallel with the lateral margins.

Hab. MEXICO, Cordova (*Sallé*, *Höge*); GUATEMALA, Sinanja (*Champion*).

Var. *b.* The two sub-basal spots on each elytron united, the transverse band broader and more angular on its anterior and posterior margins, the base broadly margined with black for about half its width, and the marginal streak (sometimes obsolete in var. *a*) longer.

Hab. GUATEMALA, Zapote (*Champion*). One example.

A variable, and apparently rare, species; seven examples only are before me. The antennæ usually have the four or five basal joints, and the extreme apex of the apical one, clear red; in the example from Zapote, which is somewhat discoloured, the two basal joints only are red. In all the specimens the head is unequally punctured, the anterior margin bearing a row of distinctly coarser impressions.

A typical example from Cordova is figured.

43. **Platydema elegans.** (Tab. IX. fig. 8.)

Platydema (?) *elegans*, Chevr. Petites Nouv. Ent. ii. p. 195[1].

Hab. MEXICO[1], Cordova (*Sallé*, *Höge*), Jalapa, Esperanza (*Höge*).

Seven examples are before me, in three of which the large black spot placed a little beyond the middle of each elytron extends inwardly, and, meeting at the suture, forms a broad transverse stripe.

We figure a typical example from Cordova.

44. **Platydema lucens.** (Tab. IX. fig. 9.)

Ovate, moderately convex, bright reddish testaceous, shining. Head red, finely and not very closely punctured, the epistoma not defined from the front, and with a row of rather coarse punctures along its anterior margin; antennæ with the five basal joints, and the outer half of the apical one, testaceous, the rest piceous, the ninth and tenth joints transverse; apical joint of the maxillary palpi securiform; prothorax

strongly transverse, distinctly margined at the sides, convex, the sides slightly rounded and rapidly narrowing anteriorly, the anterior angles rounded, the apex feebly emarginate, the base bisinuate, the surface very finely, shallowly, and diffusely punctured, red, the disc (except along the base) broadly infuscate, midway between the outer limits of which and the lateral margin is an oblique black streak; scutellum triangular, red; elytra scarcely wider than the prothorax at the base, slightly rounded at the sides, regularly punctate-striate (the punctures rather coarse and deeply impressed), the interstices exceedingly finely and rather closely punctured, testaceous, with two large black spots on each side near the base, and a very broad angulated black band (distant from the suture, and not reaching the lateral margins, and ramifications of which extend posteriorly along the fourth, sixth, and eighth interstices, enclosing testaceous patches), the second interstice (except at its basal third and the extreme apex) is also black, the suture (except at the basal third), and the third interstice for a short distance in the middle, reddish brown; legs testaceous, the outer edges of the tibiæ finely setose; beneath shining, almost smooth; epipleuræ not extending to the apex of the elytra.

Length 5 millim.

Hab. MEXICO, Cordova (*Höge*).

One example.

45. **Platydema cordovense.** (Tab. IX. fig. 10.)

Form of *P. lucens*. Head red, finely and not very closely punctured, the epistoma not distinctly defined; antennæ and prothorax as in *P. lucens*, the disc of the latter with a broad transverse black patch, the margins alone broadly reddish, the surface rather more evidently punctured; elytra testaceous, with three large black spots on each side (one near the base, one larger, angular on its basal edge, about the middle, and one near the apex), a large subtriangular black mark immediately below the scutellum, beyond which to the apex the suture is reddish brown, the interstices rather more evidently punctured than in *P. lucens*.

Length 5 millim.

Hab. MEXICO, Cordova (*Sallé*).

One example. Closely allied to, and from the same locality as, *P. lucens*, and only differing in the markings of the thorax and elytra. Additional material may possibly prove it to be a variety of that species; but for the present I prefer to retain it as distinct.

46. **Platydema unicolor.** (Tab. IX. fig. 11.)

Ovate, convex, bright red, shining. Head shallowly, sparingly, and not very finely punctured, the epistoma limited posteriorly by a shallow transverse impression; antennæ with from 4–6 basal joints, and the outer half of the apical one, red, the rest black, the penultimate joint transverse; prothorax transverse, rounded at the sides, narrowing from the base, the anterior angles broadly rounded, the apex almost straight, the base bisinuate (but not strongly) and with a distinct oblique fovea on each side, the surface very finely, shallowly, and sparingly punctured; scutellum scutiform; elytra about the width of the prothorax at the base, feebly rounded at the sides, regularly punctate-striate (the punctures deep, rather coarse, and not closely placed), the interstices exceedingly finely and sparingly punctured; legs red, the outer edge of the tibiæ finely setose.

Length $4\frac{1}{2}$–$5\frac{1}{4}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Two examples.

Var. The basal joints of the antennæ and the palpi more or less stained with piceous; the basal and apical

margins of the prothorax narrowly stained with black; the entire upper surface darker; the legs more or less stained with piceous.

Hab. PANAMA, Volcan de Chiriqui (*Champion*). Two examples.

P. unicolor may be at once known from its allies by its unicolorous red colour, the upper surface without spots or markings. In the four individuals before me each one has the antennæ differently coloured; one (from Volcan de Chiriqui) has the apical joint entirely red, though the basal joints are stained with piceous.

A Chontales specimen is figured.

47. **Platydema venustum.** (Tab. IX. fig. 12.)

Bright reddish testaceous, broad ovate, convex, shining, glabrous. Head sparingly but very evidently punctured, with several distinctly coarser impressions along the anterior margin; prothorax comparatively broad anteriorly, the sides more rounded than in the allied species, the surface exceedingly finely and sparingly punctured, the lateral margins prominent, with a transverse row of four black spots (the two inner of which are the largest) placed near the anterior margin, and another black spot on each side placed about midway between the outer anterior one and the base; antennæ with the two basal joints, and the third and fourth joints partly, and the outer half of the apical one, red; scutellum broad, triangular; elytra regularly and rather deeply punctate-striate, the interstices exceedingly finely and sparingly punctured, the lateral margins reflexed and prominent, with five rounded black spots on each, arranged thus—a discoidal row of three large and equidistant (the posterior ones sometimes smaller), and two much smaller, one placed midway between the first two large spots but much nearer the suture, the other (longer and narrow) similarly placed but near the lateral margin; beneath red, very evidently but sparingly punctured; mesosternum V-shaped, deeply concave within; prosternum strongly produced; legs red, the tibiæ more or less infuscate, slightly curved, the anterior pair dilated (more distinctly in the male) towards the apex, the outer apical angle produced and distinctly dentiform.

Length 5–6 millim., breadth 3–4 millim.

Hab. NICARAGUA, Chontales (*Belt, Janson*).

Var. The third or posterior discoidal spot on each elytron very much longer than in the type, extending inwardly to the first dorsal stria, and connected with the central discoidal spot by a narrow longitudinal streak.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Eight examples of the type, one of the variety. We figure one of the former.

The following species is perhaps best placed, provisionally, at the end of the genus *Platydema*:—

48. **Platydema (?) nitidum.**

Scaphidema nitidum, Chevr. Petites Nouv. Ent. ii. p. 170[1].

Hab. MEXICO, Yucatan (*Pilate*[1]).

Unknown to me. "Ovale, nigrum, nitidum, capite, palpis, antennis, pedibus corpo-

reque infra rubris; capite antice rotunde impresso, antennis elongatis, moniliformibus; prothorace punctulato, basi bisinuato, supra scutellum modice rotundato; scutello triangulari, acuto; elytris nitidis, regulariter minuteque punctato-striatis, disco convexis, epipleuris nigris, supra marginatis. Long. 2 millim., lat. 2 millim.—YUCATAN, a D. L. Pilate amice offertum."

LIODEMA.

Liodema, Horn, Rev. Ten. of America north of Mexico, p. 385; F. Bates, Ent. Monthly Mag. ix. p. 235.

Dr. Horn described this genus upon a single species from the United States; since then six others, from Tropical South America, have been added to it by Mr. F. Bates, and one or two from our country (identical with these) have been described by Chevrolat; *Platydema 4-notata*, Lap. & Brullé, also belongs to it.

The metropolis of *Liodema* is undoubtedly in Tropical America: we have to record seven species from our country; others doubtless still remain to be discovered in Tropical South America.

Some of the species range over a large extent of country, from Mexico to Brazil; one or two are common insects in the forest-region of Central America.

This genus is readily identified by the remarkable structure of the mesosternum, and by the subserrate antennæ; the markings of the thorax and elytra vary considerably in several species. These insects are of the same habits as *Platydema*, and found in fungoid growths on decaying trees.

1. **Liodema læve.**

Platydema lævis, Hald. Journ. Acad. Phil. ser. 2, i. p. 101 (1848) [1].
Liodema læve, Horn, Rev. Ten. of Am. north of Mexico, p. 385 [2].

Hab. NORTH AMERICA, North Carolina [1 2].—MEXICO, Jalapa (*Höge*); GUATEMALA, Capetillo (*Champion*).

Examples from Mexico and Guatemala agree with the description of this species. I have not, however, seen examples from the United States.

2. **Liodema kirschi.** (Tab. IX. fig. 13.)

Liodema kirschi, F. Bates, Ent. Monthly Mag. ix. p. 235 [1].
? *Liodema fulvum*, F. Bates, loc. cit. p. 236 [2].
Scaphidema tergocinctum, Chevr. Petites Nouv. Ent. ii. pp. 178, 243, nota [3].
Liodema inscriptum, Chevr. loc. cit. p. 222 [4].
? *Platydema 4-notata*, Lap. & Brullé, Ann. Sciences Nat. xxiii. p. 380 [5].

Hab. MEXICO, Cordova [4], Vera Cruz (*Sallé*), Jalapa, Esperanza (*Höge*); GUATEMALA (*Sallé* [3]), Capetillo, Aceytuno, Pantaleon, Cerro Zunil, Senahu (*Champion*); NICARAGUA,

Chontales (*Janson*); PANAMA, Volcan de Chiriqui (*Champion*).—COLOMBIA [5], Bogota [1] (*coll. F. Bates*); VENEZUELA, Cumana [2].

A common species in our country, whence we have received a large number of examples. *L. kirschi* and *L. inscriptum* (the types of which are before me) are perfectly identical; *L. fulvum* is probably an immature example of the same species.

According to Chevrolat (op. cit. p. 243, nota), from whose collection the insect was originally described, *Platydema* 4-*notata*, Lap. & Brullé (*P. sphæridioides*, Dej. Cat.), from Colombia, is a *Liodema*: the description of this species nearly agrees with our insect, excepting as regards the rather smaller size, and the coloration of the antennæ; in one or two Mexican examples, however, I find that the intermediate joints of the antennæ are slightly infuscate, instead of being wholly testaceous, as is almost invariably the case. With the large amount of material before me, I think it extremely probable that our insect is identical with *L. quadrinotatum*.

Immature examples of this variable insect are slightly shining, and often have the elytral markings less sharply defined; in some specimens the first red spot is crescent-shaped (the angles towards the base) and extends obliquely to the scutellum, in others it is oblique and sometimes ill-defined; the second spot is invariably more or less crescent-shaped (the angles towards the apex) and extends along the margin of the elytra to the sutural angle. The elytral striæ are usually almost obsolete, or very finely and indistinctly impressed; in one or two individuals, however, the punctures are coarser and more distinct.

This and the following species superficially resemble the genus *Sphæridium*, of the Hydrophilidæ. A fairly typical example from Capetillo is figured.

3. **Liodema obydense.**

Liodema obydense, F. Bates, Ent. Monthly Mag. ix. p. 235 [1].

Scaphidema proximum, Chevr. Petites Nouv. Ent. ii. pp. 178, 243, nota [2].

? *Platydema tenuicorne*, Chevr. loc. cit. p. 182 (=*Liodema tenuicorne*, Chevr. loc. cit. p. 243 nota) [3].

Hab. MEXICO [2], Orizaba (*Sallé*), Jalapa (*Höge*); GUATEMALA, Pantaleon, Las Mercedes, Panzos (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).—AMAZONS, Obydos [1].

Central-American examples agree, as already noted by Chevrolat, with *L. obydense* from the Amazons.

L. tenuicorne, Chevr., from Caracas [3], is very possibly a dark variety of this species.

4. **Liodema zimmermani.** (Tab. IX. fig. 14.)

Ovate, moderately convex, reddish brown, slightly shining. Head with the basal half brownish black, the frontal half red, finely and closely punctured; eyes strongly oblique, not widely separated; antennæ serrate from the fourth joint; prothorax transverse, the sides rounded in a line with the elytra and

rapidly converging from the base, the base strongly bisinuate, the surface finely and rather closely punctured, reddish testaceous, broadly marked with black (in the form of a large discoidal patch, united each side externally with a broad crescent-shaped spot); scutellum red; elytra with regular rows of very fine shallow punctures, the interstices finely, rather closely, and very evidently punctured, black, with a transverse strongly angulated band (starting from a little below the shoulder and extending to about halfway across the second interstice) before the middle, and the apex broadly, testaceous, the apical patch angulated on its anterior margin, and enclosing a short oblique brownish streak (united at the suture) placed just before the apex; antennæ (entirely) and legs testaceous; beneath reddish brown, shining.
Length 4 millim.

Hab. GUATEMALA, Pantaleon (*Champion*).

Six examples. This species slightly resembles some of the varieties of *L. kirschi*, but may be readily known by the strongly angulated testaceous bands of the elytra, and the thorax more narrowed anteriorly; from *L. horni*, from the Amazons, it differs in its narrower and more ovate form, less transverse thorax, more evidently punctured and more shining upper surface, &c.

5. **Liodema connexum.** (Tab. IX. figg. 15, 16.)

Liodema connexum, F. Bates, Ent. Monthly Mag. ix. p. 236 [1].
Platydema cruciatum, Chevr. Petites Nouv. Ent. ii. p. 182 [2].
Scaphidema cruciatum, Chevr. loc. cit. p. 187, nota [3].
Liodema cruciatum, Chevr. loc. cit. p. 243, nota.
Platydema nigrofasciatum, Chevr. loc. cit. p. 215 [4].
Liodema nigro-fasciatum, Chevr. loc. cit. p. 243, nota.

Hab. MEXICO [3 4], Cordova, Vera Cruz (*Sallé*), Jalapa (*Höge*); GUATEMALA, Purula (*Champion*); PANAMA, Volcan de Chiriqui, Bugaba (*Champion*).—COLOMBIA [1], Bogota [2].

A very variable species. The Mexican and Guatemalan examples before me all have the median transverse black band of the elytra united at the suture (extending anteriorly and posteriorly along the suture) and the basal band angulated on its lower edge. The Chiriqui specimens agree well with the type of *L. connexum*, except that the thorax is not black, but, as in all the Central-American examples, more or less marked with red; mixed with these are individuals perfectly intermediate in the elytral markings, clearly connecting the different forms, and also others in which the markings are quite obliterated.

We figure a typical example (fig. 15) from Chiriqui, and (fig. 16) a well-marked variety (=*cruciatum*, Chevr.) from Mexico.

6. **Liodema serricorne.** (Tab. IX. fig. 17.)

Liodema serricorne, F. Bates, Ent. Monthly Mag. ix. p. 236 [1].

Hab. MEXICO, Jalapa, Mirador (*Höge*); GUATEMALA, Zapote, Pantaleon, Tamahu (*Champion*); NICARAGUA, Chontales (*Belt*, *Janson*); PANAMA, Volcan de Chiriqui (*Champion*).—GUIANA, Cayenne [1]; BRAZIL, Minas Geraes (*coll. F. Bates*).

This species varies somewhat in the extent of the black markings on the thorax and elytra. An example from Jalapa is figured.

7. **Liodema flavo-variegatum.** (Tab. IX. fig. 18.)

Broad oval, convex, testaceous, slightly shining. Head black, the frontal half more or less testaceous, finely, shallowly, and somewhat closely punctured; eyes strongly oblique, not widely separated; antennæ serrate from the fourth joint, joints 7–10 and the basal half of the eleventh slightly darker; prothorax strongly transverse, the sides rounded in a line with the elytra, the base strongly bisinuate, the surface very finely and somewhat closely punctured, a large black mark (angular on its outer edge and extending to the base) in the middle of the disc, and a broad crescent-shaped black mark on either side; elytra with regular rows of fine indistinct punctures, the interstices punctured like the prothorax, marked with black, thus—the base narrowly, from whence proceed three short longitudinal streaks (two close together about the middle, and one near the shoulder), a rather broad angulated band (reaching the lateral margin and confluent at the suture) about the middle, and a narrower subangulate band (not reaching the lateral margin) before the apex, the suture also black from the subapical band to the base; legs testaceous; beneath reddish brown, shining.

Length 3–3¼ millim.

Hab. Panama, Bugaba (*Champion*).

Four examples. A small, broad ovate, convex species allied to *L. serricorne*, but only half the size, the elytra differently marked, &c.

STENOSCAPHA.

Stenoscapha, F. Bates, Ent. Monthly Mag. ix. p. 237 (1873).

This genus was described upon a single species (*S. tibialis*) from the Amazons; we now add another from Mexico.

1. **Stenoscapha jalapensis.** (Tab. IX. fig. 19.)

Narrowly ovate, moderately convex, unicolorous reddish brown, slightly shining. Head extremely finely and shallowly punctured, the epistoma sharply defined by a semicircular impressed line; eyes small, distant, slightly oblique; antennæ testaceous, joints 5–10 triangular; prothorax transverse, the sides scarcely rounded, and rapidly narrowing from the base, the surface almost smooth; elytra the width of the prothorax at the base, gradually rounded at the sides, very sparingly and almost imperceptibly punctured, with scarcely any indication of striæ; legs and palpi testaceous.

Length 3½ millim.

Hab. Mexico, Jalapa (*Höge*).

One example. The unicolorous and almost impunctate upper surface and somewhat differently formed head and thorax will separate this species from *S. tibialis*.

PANIASIS.

Mentum transverse, small; last joint of the maxillary palpi subtriangular; antennæ long, passing some distance beyond the base of the prothorax, rather slender, the third joint half as long again as the fourth, joints 5–10 long and subtriangular and decreasing slightly in length, the eleventh joint the width of, but much longer than the tenth, and bluntly rounded at the apex; head as in *Platydema* (*P. diophthalmum*,

&c.), the epistoma not clearly defined; eyes large, subtransverse, distant; prothorax transverse, strongly margined; scutellum triangular; elytra long, distinctly margined, the humeri but little prominent, regularly punctate-striate; first joint of the anterior and intermediate tarsi long, in the male broadly expanded and dilated, the outer third excavate above for the reception of the second joint; first joint of the posterior tarsi very much longer than the second and third united; tibiæ smooth on their outer edge, the outer apical angle of the anterior pair with two fine teeth (as in many *Platydemata*); prosternum horizontal, the apex a little produced and received by the concave V-shaped mesosternum; trochantin distinct; epipleuræ extending to the apex of the elytra; form elongate ovate; surface opaque.

A new genus is necessary for the reception of this somewhat remarkable species, which will be recognized amongst its allies by its elongate oval form, and by the dilatation and extension of the first joint of the anterior and intermediate tarsi. This may or may not be a sexual character; in *Lelegeis* the first joint of the anterior tarsi is similarly enlarged. The single known species, of which one (male) example only has been received as yet, forms one of Herr Höge's interesting discoveries in Mexico.

1. **Paniasis dilatipes.** (Tab. IX. fig. 22, ♂.)

Elongate ovate, moderately convex, dull black, opaque. Head transversely impressed in front, shining, coarsely and rather closely punctured, the anterior margin reddish brown; antennæ with the two basal joints and the outer half of the apical one red: prothorax transverse, the sides straight from the base to a little before the middle, thence rounded and narrowing to the apex, the base bisinuate and with a very shallow longitudinal impression on each side, the apex deeply emarginate, the anterior angles prominent but obtuse, the surface regularly, very evidently, and somewhat sparingly punctured; elytra long, very slightly rounded at the sides, a little wider than the prothorax at the base, widest about the middle, finely and shallowly punctate-striate, the interstices flat and exceedingly finely and sparingly punctured; femora and knees reddish brown, the tibiæ black, the tarsi red; beneath black, shining, sparingly punctured, the epipleuræ reddish brown from the middle.

Length 6 millim. (♂.)

Hab. Mexico, Jalapa (*Höge*). One example.

LELEGEIS.

Mentum trapeziform, deflexed at the sides; last joint of the maxillary palpi broad, subsecuriform; antennæ reaching a little beyond the base of the prothorax, joints 5–10 about equal in length, subtriangular, and feebly serrate within, the third joint the length of, but much narrower than, the fourth, the eleventh joint a little narrower but much longer than the tenth, and bluntly rounded at the apex; head very short, deeply sunk into the prothorax, the space before the eyes very narrow, the epistoma short, truncate in front and not defined; eyes very large, oblique, separated by a narrow space, partly hidden by the front margin of the prothorax; prothorax very short, strongly transverse; scutellum large, transverse; elytra wider than and rather more than three times as long as the prothorax at the base, rather strongly margined, the humeri prominent, the sides almost straight to beyond the middle, broadly rounded at the apex, regularly punctate-striate; tibiæ serrate on their outer edge, the two hind pairs much more coarsely; the anterior tibiæ also armed with two very fine teeth (placed close together, at some distance before the apex), the intermediate pair curved, very obliquely cut off at the apex, and also serrate on their inner edge, the posterior pair straight and also (finely) serrate within; first joint of the anterior tarsi the length of the apical one, greatly thickened and dilated, and feebly sub-bilobed; first joint of the posterior tarsi long, longer than the second and third together; epipleuræ extending to the apex of the elytra, concave within; trochantin distinct; mesosternum V-shaped (the prosternal process appears to be broken off); intercoxal process rounded; form oblong ovate, broad, subparallel; surface shining.

This genus contains a single species from Mexico. I can suggest no near ally to this insect, which will be readily identified by the characters given; its affinities, however, are clearly with *Platydema*.

1. **Lelegeis æneipennis.** (Tab. IX. fig. 23, ♂.)

Oblong ovate, depressed, subparallel, brownish testaceous, shining. Head transversely impressed in front, finely and sparingly punctured; prothorax strongly transverse, the sides slightly rounded and gradually converging from the base, the apex deeply arcuate emarginate, the anterior angles rounded, the base deeply bisinuate, the surface sparingly and finely (the sides rather more coarsely) punctured; elytra finely punctate-striate (the punctures shallow and rather closely placed), the interstices flat and very minutely and sparingly punctured, darker in colour than the prothorax, brown, with a distinct æneous tinge; legs and antennæ testaceous; beneath shining, almost smooth, the ventral surface sparingly punctured, along the sides much more coarsely punctured, the first segment also longitudinally wrinkled.

Length 6 millim. (♂.)

Hab. Mexico, Cordova (*Sallé*).

One example, in somewhat immature condition.

COSMONOTA.

Cosmonota, Blanchard, Hist. Nat. des Ins. ii. p. 30 (1845); Lacordaire, Gen. Col. v. p. 305.

Some few species of this genus are known from Tropical America; one has been described from Mexico, and we now add another from Nicaragua.

Cosmonota, as Lacordaire remarks, is very near *Platydema*, and separated from that genus more by general facies and system of coloration than by salient characters.

These insects are of the same habits as *Platydema*.

1. **Cosmonota nigripes.** (Tab. IX. fig. 20.)

Cosmonota nigripes, Chevr. Petites Nouv. Ent. ii. p. 173 [1].

Hab. Mexico, Cordova (*Sallé* [1], *Höge*); British Honduras, Belize, R. Sarstoon (*Blancaneaux*); Guatemala, Zapote, El Tumbador (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*).

A large species, with the upper surface red and shining, the tibiæ, tarsi and antennæ (the two basal joints excepted) black.

A totally different insect, from Brazil, in Mr. F. Bates's collection is labelled (apparently in Chevrolat's handwriting) "*C. nigripes*, Chevr., type"; this species, however, does not agree with either the published description or locality. An example from Chontales is figured.

2. **Cosmonota pubescens.** (Tab. IX. fig. 21.)

Obovate, rather convex, black, shining. Head long, the epistoma long, projecting beyond the sides of the front, and sharply defined, coarsely (the epistoma more closely and rather more finely) punctured, the intra-ocular space shallowly impressed in the middle; labrum and mouth-parts red; antennæ long, setose, joints 7–10 subtriangular, the eleventh joint much longer than the tenth and bluntly rounded at the apex, the two basal joints, and the outer half of the apical one, red, the rest piceous; prothorax transversely convex, broader than long, narrowing a little anteriorly, the sides slightly rounded in the middle, and distinctly sinuate before the base, the apex broadly but not deeply arcuate emarginate, the anterior angles rounded, the base strongly bisinuate and with an oblique fovea on each side, the posterior angles prominent but not acute, the surface finely, regularly, and sparingly punctured, and with two or three shallow

impressions on each side before the prominent lateral margins; scutellum large, triangular, reddish brown; elytra distinctly wider than the prothorax at the base, slightly rounded at the sides (but not in a line with the prothorax), widest about the middle, strongly margined, the humeri prominent and slightly grooved within (for the reception of the posterior angles of the prothorax), regularly punctate-striate (the punctures not very closely placed, and rather coarse), the interstices flat, and finely and sparingly punctured, red, the lateral margins narrowly (and the epipleuræ) black; legs long, piceous, clothed with short scattered hairs, the knees red, the apices of the anterior tibiæ, and the stout tarsi beneath, somewhat thickly clothed with fulvous hairs; epipleuræ broad, extending to the apex of the elytra; beneath dark reddish brown, shining, sparingly punctured, each puncture bearing a short fulvous hair.
Length 10 millim.

Hab. NICARAGUA, Chontales (*coll. F. Bates, Belt*).

Three examples. This distinct species was discovered by the late Mr. Belt. *C pubescens* is allied to an undescribed insect from the Amazons, and with it will probably have eventually to be separated from *Cosmonota*. The long legs and antennæ, and pubescent under surface and legs, are characters not to be found in the other species of this genus; the head, also, is somewhat differently formed.

HAPSIDA.

Apsida, Lacordaire, Gen. Col. v. p. 309, nota; F. Bates, Ent. Monthly Mag. x. p. 15 (1873).
Hapsida, Gemm. & Harold, Cat. vii. p. 1955.

This Neotropical genus, briefly characterized by Lacordaire, has been fully described by Mr. F. Bates; five species are known, all of which are found in our country, whence we now add four others. *Hapsida* has its headquarters in Central America, the genus ranging from Mexico to Colombia. The different species are usually very common where they occur; they have quite different habits to those of most of the preceding genera of this group, and are found in or near the forest, upon herbage, or by beating the withered still-attached leaves of fallen trees in new clearings; never, so far as my experience goes, about fungi. The genus may be known among its allies by the five-jointed club of the antennæ; some of the species are beautifully ornamented with bright metallic green and cupreous stripes. All the species vary a good deal in size, general outline, and colour; one new one (*H. terebrans*) is remarkable for the structure of the secondary sexual organs of the male, which differ greatly from those of the allied species. The tarsi are slightly dilated in the males of the larger species, similar in both sexes in the smaller forms. The great resemblance of some of the species to the Chrysomelidæ is not to be overlooked. These insects, owing to their tough elytra and soft integuments, are difficult to pin without injury.

1. **Hapsida chrysomelina.** (Tab. IX. fig. 24, ♀.)

Apsida chrysomelina, Lacord. Gen. Col. v. p. 309, nota[1]; F. Bates, Ent. Monthly Mag. x. p. 15[2].

Hab. MEXICO, Cordova (*Sallé, Höge*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Sinanja, Senahu (*Champion*); NICARAGUA, Chontales[2] (*Belt, Janson*).—COLOMBIA[1].

Compared with typical specimens the three individuals from Guatemala have the thorax more shining; the two (male) examples, from British Honduras, are much narrower, and with the thorax slightly rounded at the sides; both, however, merely represent varieties of one and the same species.

Specimens of this species in the Sallé collection are labelled *Apsida pulchra*, Chevr.

A female example from Chontales is figured.

2. **Hapsida gibbosa.**

Form of *H. chrysomelina*; black, the upper surface unicolorous dark bronze, slightly shining. Head very minutely and sparingly punctured; prothorax transverse, the sides and the very prominent anterior angles strongly margined, the apex very deeply arcuate emarginate, the surface almost smooth; elytra strongly convex, almost gibbous in the middle, the disc broadly flattened behind, with regular rows of fine punctures (much more distinct towards the suture, and the punctures distant one from another), the interstices almost smooth, the surface, if anything, a little brighter in tint than the prothorax, and sometimes slightly cupreous; beneath shining black, almost smooth; metasternum broadly and transversely deflexed behind.

Length 7–11¼ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*); British Honduras, Belize (*Blancaneaux*); Guatemala, San Juan in Vera Paz, Chacoj, San Gerónimo, Zapote, Volcan de Atitlan, Mirandilla, Cerro Zunil, San Isidro, El Tumbador, Las Mercedes (*Champion*).

An abundant species in the forest-region of Guatemala, and found in shady places in the curled-up withered leaves of recently fallen trees; one example only from Mexico.

This insect so closely resembles *H. chrysomelina*, except in its unicolorous dark bronzy upper surface, as to be scarcely distinguished from that species; I am unwilling, however, to treat it as a variety, more especially as in the very large number of specimens (about 150) before me I can find no intermediate forms. Nevertheless, like *H. chrysomelina*, it varies very much in size and general shape, some examples being very much narrower than others.

3. **Hapsida seriato-punctata.** (Tab. IX. fig. 25, ♀.)

Form of *H. chrysomelina*; unicolorous blackish bronze, with a slight cupreous tinge, shining. Head with a few widely scattered minute punctures; prothorax as in *H. chrysomelina*; elytra with regular rows of coarse deep punctures (rather finer and placed a little closer together towards the suture), the interstices exceedingly minutely and very sparingly punctured; beneath black, the epipleuræ slightly cupreous, shining, almost smooth.

Length 10½ millim. (♀.)

Hab. Mexico, San Andres Tuxtla (*Sallé*).

One example. This species is allied to *H. chrysomelina* and *H. gibbosa*, but will at once be known by the regular rows of coarse impressions (continued to the sides and apex) on the elytra; the upper surface blackish bronze and shining; and the elytra less gibbous in the middle. *H. seriato-punctata* resembles a species of *Chrysomela*, e. g. *C. lamina*, of Europe.

4. Hapsida belti.

Apsida belti, F. Bates, Ent. Monthly Mag. x. p. 16[1].

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Chacoj in the Polochic valley (*Champion*); NICARAGUA, Chontales[1] (*Belt*).

In the single example from Mexico the upper surface is much more shining than in the individuals from Guatemala and Nicaragua.

5. Hapsida punctipennis.

Oblong ovate, convex, brownish black, shining. Head finely and sparingly punctured, reddish brown; prothorax similarly coloured, finely, shallowly, and sparingly punctured; elytra with regular rows of rather fine shallow punctures (the punctures closely placed, and more or less obsolete towards the sides and base), the interstices sparingly and comparatively coarsely punctured (the punctures at the sides appearing nearly as coarse as the striæ and almost confused with them), the base broadly and shallowly impressed on each side near the shoulders, the surface marked (as in *H. belti*) with bright metallic green and purplish-cupreous stripes, regularly placed along the suture only, confused and more or less confluent outwardly; legs black, the knees red; beneath brownish black, the epipleuræ rather lighter, shining.
Length 6–7 millim. (♂ ♀.)

Hab. GUATEMALA, Cerro Zunil, Las Mercedes (*Champion*).

Many examples. This species will be readily known from *H. belti* and *H. purpureo-micans* by the very evident and comparatively coarse punctuation of the interstices of the elytra; it is apparently constant in its coloration, one immature example only showing any signs of the disappearance of the metallic colours.

6. Hapsida æneo-micans.

Apsida æneomicans, F. Bates, Ent. Monthly Mag. x. p. 16[1].
Hapsida æneo-micans, Chevr. Petites Nouv. Ent. ii. p. 173[2].

Hab. MEXICO[1], Cordova (*Sallé*[2]), Cerro de Plumas, Jalapa (*Höge*).

A common species in Mexico. This insect appears to have the elytra a little broader behind than in the very closely allied *H. purpureo-micans*; the upper surface of a lighter metallic greenish-bronze colour.

7. Hapsida purpureo-micans.

Apsida purpureomicans, F. Bates, Ent. Monthly Mag. x. p. 16[1].

Hab. MEXICO, Cordova (*Sallé*); BRITISH HONDURAS, Belize (*coll. F. Bates*), R. Hondo (*Blancaneaux*); GUATEMALA, Senahu, Cahabon, Chacoj, Teleman, Sinanja, Sabo, Cubilguitz, Purula, San Gerónimo, Zapote, Las Mercedes, El Tumbador (*Champion*); COSTA RICA, Cache (*Rogers*); PANAMA, Bugaba, Volcan de Chiriqui, David (*Champion*).—COLOMBIA[1].

This is one of the most perplexing species of Tenebrionidæ I have yet had to deal with; the examination, however, of a very large amount of material, including numbers of specimens collected together in the same localities, has convinced me that it can only

be treated satisfactorily as an extremely variable insect, and that the numerous varieties all represent one and the same species. The three following are here noticed:—

1. Upper surface bright bronzy cupreous, or (rarely) metallic purple; the thorax reddish brown or black.
2. Upper surface less shining, duller bronze; the thorax reddish brown.
3. Elytra marked (as in *H. belti*) with bright metallic green and purplish cupreous (often with golden and bluish reflections) stripes, regularly placed along the suture, but confluent and irregular outwardly.

The most vividly coloured examples are from Chiriqui; mixed with these, as with the specimens from the other localities, are many in which the elytra are unicolorous, but often with traces at the margins or along the suture of metallic green tints. The species varies in length from $3\frac{1}{2}$–7 millim., and in breadth from 2–$3\frac{1}{4}$ millimetres. The beautiful vivid colours of the elytra, as exhibited in this species, are evidently more or less evanescent, and cannot, unless supported by other characters, be regarded as of specific value.

The type of this species, contained in Mr. F. Bates's collection, is without abdomen and in a very mutilated condition; it is of a rather more vivid purple colour than any of our Central-American examples, and with only slight greenish reflections.

Small examples closely resemble *Gonospa phædonoides*.

8. **Hapsida terebrans.** (Tab. IX. fig. 26, ♂.)

Closely allied to *H. purpureo-micans*, and differing as follows:—Shorter and broader in form; the elytra relatively shorter and more rounded at the sides, usually marked (as in var. 3 of *H. purpureo-micans*) with bright metallic green and purplish cupreous more or less evanescent stripes, regularly placed along the suture but confluent and irregular outwardly, the rows of impressions represented by rather coarse distantly placed punctures (which are most distinct on the posterior portion of the disc, and obsolete at the base, apex, and sides); in the male the horny sheath of the œdeagus encloses a second sheath, the latter being divided at the apex into two very long spine-like processes, near the middle of which on each side externally are placed three or four bristles; in the female the accessory sexual organs are formed externally as in *H. purpureo-micans*, and armed (as usual) on each side a little before the apex with a stout styliform process and a few short bristles; the rest as in *H. purpureo-micans*.

Length 3–$4\frac{1}{2}$ millim. (♂ ♀.)

Hab. British Honduras, Belize (*Blancaneaux, coll. F. Bates*); Guatemala, Teleman, Chacoj (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui (*Champion*).

Many examples. Mixed with *H. purpureo-micans*, and found in many of the localities in company with it, specimens are occasionally to be met with of a more rounded and shorter form: these are coloured exactly as in var. 3 of that species, and, in spite of the apparent great dissimilarity in outline, seemed to me at first to represent another variety of that inconstant and variable insect. In connection, however, with the shorter and rounder form I find that the accessory sexual organs of the male differ greatly

from those of *H. purpureo-micans*: in *H. terebrans* they are formed as above described; in *H. purpureo-micans* as in all the allied species examined, *e. g.* the sheath simple and pointed at the apex. In many of the male examples of *H. terebrans* before me the inner bilobed sheath (enclosing the simple central tube) is extruded and plainly visible.

The dissection of a good many species of Tenebrionidæ has not yet revealed to me any structure of the male organs similar to what is to be found in *H. terebrans*; in the œdeagus of *Pedinus* I have found a long and stout spine-like process on each side of, but not attached to, the inner tube, the latter being enclosed in a sheath of the ordinary simple character. In *H. terebrans* there appear to be two horny sheaths *, the outer one short and capable of expansion when the long bilobed inner one is extruded; I can find nothing analogous to this in the other species of the genus dissected, all appear to have the outer sheath simple at the apex (and apparently not capable of expansion) and without trace of an inner one. Dissection of other allied forms may probably reveal a similar structure. We thus have two apparently very closely allied species furnished with very dissimilar male sexual organs.

In this species the elytra constantly exhibit traces of the metallic stripes, which are not entirely obliterated in any of the examples before me. We figure a male example from the Volcan de Chiriqui; also the male (fig. 26 *a*) and female (fig. 26 *b*) secondary sexual organs.

9. **Hapsida boucardi.** (Tab. IX. figg. 27, ♀; 28, ♂.)

Apsida boucardi, F. Bates, Ent. Monthly Mag. x. p. 17[1].
Cosmonota geminata, Chevr. Petites Nouv. Ent. ii. p. 173[2].
Hapsida geminata, Chevr. loc. cit. pp. 178, 182, nota.
Cosmonota grammica, Chevr. loc. cit. p. 173[3].
Hapsida grammica, Chevr. loc. cit. p. 178, nota.

Hab. Mexico [2 3] (*coll. F. Bates* [1]), Santecomapan, Cordova (*Sallé*), Jalapa (*Höge*); British Honduras, Belize (*coll. F. Bates, Blancaneaux*); Guatemala, El Tumbador, Zapote, San Gerónimo, Teleman, Senahu (*Champion*); Panama, Bugaba, Volcan de Chiriqui, David, near the city (*Champion*).

Generally distributed in our country. The long series of examples connect the numerous varieties of this insect. The elytra in some examples have one dorsal brownish stripe, in others two black stripes; rarely the elytra are entirely testaceous. The variety with one stripe (sometimes obsolete) often has the disc of the thorax more or less marked with black anteriorly: this form I have only seen from Cordova, where also the two-striped variety is found.

Examples from Guatemala southwards have smoother elytra, and the punctures not so closely placed. Jalapa specimens are comparatively narrow and have the rows of punctures on the elytra deeply impressed. *H. boucardi*, like the other species of the

* In the figure (26*a*) our artist has not indicated the division between the two.

genus, varies considerably in general shape. Fully coloured examples have the upper surface reddish testaceous; the suture, two dorsal stripes (sometimes connected before the apex), and the lateral margin, black.

We figure a male of the striped form (fig. 28) from Volcan de Chiriqui, and a female of the pale variety (fig. 27) from Cordova; also (fig. 28 *a*) the whole of the œdeagus of the male.

GONOSPA.

Gonospa, F. Bates in litt.

Mentum trapeziform, the sides strongly deflexed; last joint of the maxillary palpi broad and swollen, subsecuriform, the apex slightly concave; antennæ short, not reaching the base of the prothorax, the six outer joints flattened and broader and widening outwardly, joints 6–10 transverse and subserrate within, the eleventh joint twice the length of but slightly narrower than the tenth, and broadly rounded at the apex; head slightly deflexed, short, broad; epistoma broadly truncate in front; labrum partly hidden from above, without visible connecting clypeus; eyes convex, widely separated, rounded, very slightly emarginate in front, and free of the anterior margin of the prothorax; prothorax strongly transverse, the lateral margins swollen and reflexed, the base strongly bisinuate, with a shallow oblique fovea on each side, and closely embracing the elytra; scutellum small, triangular; elytra slightly wider than the prothorax at the base, short, convex, shallowly punctate-striate, and with a marginal row of irregular impressions; legs short; tibiæ slightly curved, the spurs small; tarsi short, the first joint of the posterior pair short, the length of the two following joints united; prosternum broad, horizontal, the apex rounded, slightly produced, and margined within in *G. phædonoides*, still broader and triangularly produced in *G. amazonica* and *G. brasiliensis*; mesosternum broad, the apex slightly produced and semicircularly emarginate in *G. phædonoides*, V-shaped and deeply excavate within in *G. amazonica* and *G. brasiliensis*; intercoxal process very broad, subtriangular; trochantin distinct; epipleuræ abruptly ending at the last ventral suture; form short oval, convex; surface shining, metallic.

This new genus, already recognized by F. Bates, contains three species, one from the State of Panama, the other two from the Amazons*. From *Hapsida*, with which it

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* **Gonospa amazonica.**

Bronze-black, shining; head coarsely and rather closely punctured, the epistoma defined posteriorly by a deeply impressed groove; prothorax moderately transverse, the apex rather deeply emarginate, the anterior angles prominent, the surface rather coarsely but not closely punctured; elytra with regular rows of coarse shallow punctures, and a marginal row of coarse irregular impressions, the interstices exceedingly finely and sparingly punctured, the sides broadly and indefinably dark reddish brown; beneath shining, finely and sparingly punctured, the prosternum, the metasternum in front, and the anterior margin of the first three ventral segments with coarser impressions. Length 4 millim.

Hab. Amazons, Santarem (*H. W. Bates*).

A single example in Mr. F. Bates's collection, labelled as above. Allied to but distinct from *G. phædonoides*; differing in the structure of the pro- and mesosternum, the sculpture of the upper surface, &c.

Gonospa brasiliensis.

Closely resembling *G. amazonica*, and differing as follows:—Larger, colour dark bronze; prothorax less regularly punctured, the disc and sides with coarser impressions, the anterior angles more obtuse and rounded; elytra unicolorous bronze, the interstices still more finely punctured, the impressions along the margin shallower and not so regularly placed; the ventral surface more regularly punctured and without coarser impressions along the anterior margin of the first three segments; the rest as in *G. amazonica*. Length 6½ millim.

Hab. Amazons, Santarem (*H. W. Bates*).

A single specimen in Mr. F. Bates's collection.

agrees in the structure of the meso- and metasternum, &c., it will be known by its indistinct clypeal membrane, differently shaped head, rounded eyes, six-jointed antennal club, &c. *Gonospa* resembles a genus of Chrysomelidæ, e. g. *Phædon*. The elytra bear just within the reflexed lateral margins a series of coarse irregular impressions, as in many Carabidæ. Same habits as *Hapsida*.

1. **Gonospa phædonoides.** (Tab. IX. fig. 29, ♂.)

Short oval, convex, above metallic bronzy cupreous, shining. Head coarsely and rather sparingly punctured, the epistoma indistinctly defined; prothorax strongly transverse, the apex broadly but feebly emarginate, widest at the base, narrowing a little anteriorly, the sides slightly rounded before the middle, thence straight to the base, the surface rather coarsely but not closely punctured, the disc smoother; elytra with regular rows of rather fine distantly placed shallow punctures, and an interrupted marginal row of irregular, coarsish impressions (placed just within the reflexed margins), the interstices flat and exceedingly finely and sparingly punctured, the base shallowly impressed on each side in the middle; antennæ with the four basal joints and the extreme apex red, the rest black; legs dark reddish-brown or black, the knees and tarsi more or less red; inner side of the posterior tibiæ in the male feebly emarginate before the apex; beneath dark reddish-brown, shining, very finely and sparingly punctured.

Length $3\frac{1}{2}$–$4\frac{1}{4}$ millim. (♂ ♀.)

Hab. PANAMA, Bugaba (*Champion*).

Two examples.

Group TRACHYSCELIDES.

This group contains only the well-known genus *Phaleria* (represented on the coasts of almost every part of the world, except Australia, and also in many oceanic islands), and *Bycrea* and *Scaptes*. *Trachyscelis* and *Anemia*, represented in North America, as well as in Europe, have not yet been received from our country.

PHALERIA.

Phaleria, Latreille, Hist. Nat. Crust. et Ins. x. p. 300 (1804); Mulsant, Hist. Nat. Col. de France, Latigènes, p. 190; Lacordaire, Gen. Col. v. p. 286; Horn, Rev. Ten. of Am. north of Mexico, p. 375; Lec. & Horn, Class. Col. N. A. p. 383.

Numerous species of this genus have been described from Europe, Madeira, the Cape Verd and Canary Islands, Africa, Madagascar, North and South America, the Antilles, Galapagos Islands, &c. Nine species have been described from North America; one only from Central America, whence we now add eight others. The different species are found beneath decaying seaweed or at the roots of herbage on sandy sea-coasts, and are apparently not very widely distributed; one new species described here is, however, found both on the Atlantic and Pacific coasts. Some of the species inhabiting North and South America have the margins of the thorax and elytra fringed with hairs.

* *Base of the thorax margined.*

a. *Elytra coarsely punctate-striate.*

1. **Phaleria guatemalensis.** (Tab. X. fig. 1.)

Ovate, convex, reddish-testaceous, shining. Head transversely impressed in front, sparingly and somewhat coarsely punctured; prothorax transverse, the sides slightly rounded and converging from the base, the apex deeply emarginate, the anterior angles prominent, the base very distinctly margined and with a deeply impressed oblique fovea on each side, the surface smooth and impunctate, the base often narrowly piceous; elytra scarcely wider than the prothorax at the base, the humeri not prominent, coarsely punctate-striate, the scutellar stria deeply impressed, the interstices feebly convex and almost impunctate, the disc with a large common broad black or piceous patch about the middle extending more or less broadly to the base; legs and antennæ testaceous.

Length $4\frac{1}{2}$–$6\frac{1}{2}$ millim. (♂ ♀.)

Hab. Guatemala, Champerico (*Champion*).

Many examples. This species will be readily known by the ovate form, the base of the thorax very distinctly margined, and the very coarsely punctate-striate elytra; the specimens vary but little in the maculation of the elytra, in one only the common black patch does not extend to the base.

b. *Elytra finely striate.*

2. **Phaleria panamensis.**

Elliptic, moderately convex, testaceous, rarely piceous, rather shining. Head finely and somewhat closely punctured; prothorax transverse, the sides slightly rounded and converging from the base, the base narrowly and finely margined and with an oblique fovea on each side, the surface very finely, shallowly, and sparingly punctured, the base often narrowly (rarely broadly) piceous; elytra slightly wider than the prothorax at the base, finely striate, the striæ punctured towards the base, more deeply impressed behind, the interstices (if viewed with a strong lens exhibiting a very closely wrinkled surface) finely and somewhat closely punctured, colour very variable—from testaceous with a triangular discoidal patch on each elytron behind the middle and the suture between piceous or black, to black with the margins and shoulders alone testaceous (as in *P. dytiscoides*); legs and antennæ more or less testaceous; beneath reddish-brown, shining, finely and rather closely punctured.

Length 5–$5\frac{3}{4}$ millim. (♂ ♀.)

Hab. Panama, near the city, San Miguel in the Pearl Islands (*Champion*).

A very variable insect, as regards the coloration of the thorax and elytra; the base of the thorax often more or less piceous, the elytra exhibiting every intermediate grade between testaceous with a dark discoidal spot on each, to black with the margins only testaceous. The variety coloured as in *P. dytiscoides* may be known from that species by the comparatively shorter and broader form; the thorax with the base only piceous, the anterior half of the disc always more or less testaceous.

I found this species in the greatest profusion on the beach at Panama; but met with only one example in the Pearl Islands.

3. **Phaleria dytiscoides.** (Tab. X. fig. 2.)

Elongate oval, moderately convex, reddish-brown or black, rather shining. Head sparingly and finely punctured; prothorax transverse, the sides feebly rounded and converging from the base, the apex emarginate,

the anterior angles obtuse, the base finely margined and with an oblique fovea on each side, the surface exceedingly finely and sparingly punctured, the sides rarely marked with reddish-testaceous anteriorly; elytra the width of the prothorax at the base, the humeri not prominent, narrowly and finely striate, the striæ punctured before the middle, deeply impressed behind, the interstices flat (if viewed with a strong lens exceedingly minutely and closely wrinkled) and finely and sparingly punctured, black, with the lateral margins testaceous throughout (the testaceous colour extending a little upwards on each side of the suture at the apex and sometimes a little inwards at the base), or (rarely) entirely reddish-brown or black with the apex occasionally testaceous; legs and antennæ variable in colour, piceous or testaceous; beneath reddish-brown, finely and not very closely punctured, shining.

Length $4\frac{1}{3}$–7 millim. (♂ ♀.)

Hab. British Honduras, Belize (*coll. F. Bates*), mouth of the R. Sarstoon (*Blancaneaux*); Guatemala, Champerico (*Champion*); Nicaragua, Corinto (*Champion*).

Var. Smaller; the sides of the prothorax broadly testaceous; elytra with about the three outer interstices testaceous, the testaceous colour extending inwards at the base and upwards at the apex.

Hab. Guatemala, San José (*Champion*); Nicaragua, Corinto (*Champion*).

A variable species. In the majority of the specimens the two outer interstices of the elytra are testaceous; others have only the apex testaceous, or are wholly reddish-brown or black. All the examples from San José differ as above described; at Corinto the various forms were collected together. I met with this species in great profusion on the Pacific coast at Champerico, beneath refuse on the beach, the insect readily taking to wing when disturbed; it was not uncommon at San José and Corinto. Examples from the Atlantic coast, from British Honduras, agree perfectly with others found on the Pacific, at Champerico. We figure an example from British Honduras. *P. longula*, Lec., from Mississippi Island, Gulf of Mexico, to judge from the description, must be allied to *P. dytiscoides*.

4. Phaleria marginipennis.

Closely allied to *P. dytiscoides*, and differing as follows:—Rather larger and broader; the prothorax rather more rounded at the sides anteriorly, the sides straighter and more parallel behind the middle, the base narrowly margined; the elytra distinctly wider than the prothorax at the base, the humeri prominent, more or less distinctly margined with testaceous.

Length $5\frac{3}{4}$–$7\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Tres Marias Islands (*Forrer*).

Six examples, agreeing pretty closely; in all the elytra are distinctly wider than the base of the thorax, thus differing from *P. dytiscoides*.

5. Phaleria opacicollis.

Form of *P. dytiscoides*, piceous black, rather dull. Head rather closely and not very finely punctured; prothorax broad, transverse, widest a little before the base, the sides distinctly rounded from the base and not much narrowed anteriorly, the anterior angles somewhat prominent though obtuse, the base narrowly margined and with an oblique fovea on each side, the surface dull (owing to the exceedingly minutely wrinkled sculpture) and evidently though very finely and sparingly punctured, the sides slightly paler; elytra scarcely wider than the prothorax at the base, the humeri not prominent, finely striate, the striæ

punctured before the middle, deeply impressed behind, the interstices flat, exceedingly minutely and closely wrinkled (more evident than on the prothorax), and with numerous scattered very fine punctures, the margins reddish-testaceous, the testaceous colour extending (as in *P. dytiscoides*) a little upwards along the suture at the apex and a little inwards at the base.

Length 6 millim.

Hab. PANAMA, San Miguel in the Pearl Islands (*Champion*).

One example. Closely allied to *P. dytiscoides*, but with the thorax comparatively broader (especially anteriorly), the sides more rounded, and the surface duller; the elytra (as in *P. dytiscoides*) margined with testaceous.

6. **Phaleria pilatei.**

Phaleria pilatei, Chevr. Comptes Rendus de la Soc. Ent. Belg. xxi. p. ccxlix[1].

Hab. MEXICO, Yucatan (*Pilate* [1]).

Unknown to me. According to the description (*loc. cit.*) this is an elongate, moderately convex species; the upper surface testaceous and shining, the eyes black, the thorax narrowly margined at the base, the elytra finely striate.

7. **Phaleria pacifica.**

Elongate oval, convex, black, shining. Head transversely impressed in front, finely and sparingly punctured, the orbits reddish; prothorax rather broader than long, comparatively elongate, widest a little before the base, the sides almost straight behind the middle, rounded and narrowing anteriorly, the apex feebly emarginate, the anterior angles almost rounded, the base narrowly margined and with a longitudinal impression on each side, the surface exceedingly finely and sparingly punctured, the margins sometimes lighter; elytra scarcely wider than the prothorax at the base, the humeri not prominent, regularly striate, the striæ punctate before the middle and as usual more deeply impressed behind, the interstices very finely and somewhat closely punctured; legs and antennæ ferruginous, the femora and tibiæ more or less infuscate.

Length 5½–6 millim. (♂ ♀.)

Hab. GUATEMALA, Champerico, San José (*Champion*); NICARAGUA, Corinto (*Champion*).

Eight examples. This species may be known by its shining black colour, elongate and convex form, and comparatively long thorax; it is apparently allied to *P. picipes*, Say, from the southern and middle Atlantic coast.

** *Base of the thorax not margined.*

8. **Phaleria neotropicalis.** (Tab. X. fig. 3.)

Elliptic, moderately convex, testaceous, dull, scarcely shining. Head piceous, the anterior half more or less reddish-testaceous, finely and sparingly punctured; prothorax transverse, the sides very feebly rounded and obliquely converging from the base, the apex arcuate emarginate, the anterior angles prominent, the base not margined and with a shallow oblique fovea on each side, the surface almost impunctate, the base sometimes very narrowly darker; elytra scarcely wider than the prothorax at the base, the humeri rounded and not prominent, widest a little before the middle, very finely striate, the striæ obsolete before the middle, lightly impressed behind, the interstices flat, the entire surface (if viewed with a lens) exceedingly minutely and closely wrinkled, the disc with a large common black or piceous scutiform patch extending

more or less broadly to the base; legs and antennæ testaceous, the three basal joints of the anterior tarsi slightly dilated in the male.

Length 3½–4¼ millim. (♂ ♀.)

Hab. GUATEMALA, San José, Champerico (*Champion*).

This distinct little species may be known by the sculpture of its rather dull upper surface, the base of the thorax not margined, and the faintly impressed elytral striæ; the markings of the elytra are very constant in the seven examples before me.

9. **Phaleria insularis.** (Tab. X. fig. 4.)

Elliptic, moderately convex, testaceous, slightly shining. Head piceous, the anterior margin paler, sparingly and not very finely punctured; prothorax transverse. the sides converging from the base, slightly rounded before the middle, almost straight behind and also just before the apex, the anterior angles prominent, the base not margined and with a shallow obliqne fovea on each side, the surface exceedingly finely and sparingly punctured, the base sometimes very narrowly piceous; elytra distinctly wider than the prothorax at the base, the humeri prominent, finely and narrowly striate, the striæ more or less obsolete before the middle, lightly impressed behind, the interstices flat, each elytron with a short longitudinal or oblique brown or piceous streak a little beyond the middle, the suture narrowly and the first interstice for a short distance beyond the middle also piceous; legs and antennæ testaceous, the three basal joints of the anterior tarsi distinctly dilated in the male.

Length 5–5½ millim. (♂ ♀.)

Hab. MEXICO, Tres Marias Islands (*Forrer*).

This species is closely allied to *P. debilis*, Lec., from Cape San Lucas, but, judging from the description, distinct. *P. debilis* is said to have the elytra not wider than the thorax at the base; in *P. insularis* the thorax, though transverse, is comparatively narrow, distinctly narrower than the elytra at the base.

The seven examples before me scarcely vary in the maculation of the elytra.

BYCREA.

Bycrea, Pascoe, Proc. Ent. Soc. Lond. 1868, p. xii; E. Dugès, Ann. Soc. Ent. Belg. xxix. pt. 2, pp. 51–54, t. 4. figg. 1–25 (1885).

This genus, very briefly described by Mr. Pascoe, contains a single species, *B. villosa*, from Mexico. Dr. E. Dugès (*op. cit.*) has quite recently given a full account of the life-history of this species, describing and figuring the larva and pupa, as well as the perfect insect—this very careful observer having found both the larva and the perfect insect "in the nests of an ant, *Atta cephalota*, the larva appearing to live on the detritus of *Acacia albicans*, of which the nests are in great part formed."

In *Bycrea* the anterior and intermediate tibiæ are each furnished at the inner apical angle with a single long and stout curved spur (described by Mr. Pascoe as "tarsi unicalcarati"), and the inner apical angle of the posterior tibiæ with a shorter spur; the first joint of the anterior tarsi greatly dilated in the male; the upper surface (in fresh specimens) densely clothed with golden brown decumbent hairs.

1. **Bycrea villosa.** (Tab. X. fig. 5, ♂.)

Bycrea villosa, Pascoe, loc. cit. p. xii[1]; E. Dugès, loc. cit. p. 51, t. 4. figg. 1–25[2].

Hab. Mexico[1], Matamoras (*coll. F. Bates*), Izucar, Puebla (*Sallé*), Guanajuato (*Dugès*[2], *Sallé*), Tupataro (*Dugès*[2]).

SCAPTES.

Scaptes (Eschsch.), Dej. Cat. 3rd edit. p. 215.

Mentum transverse, rounded at the sides, broadly arcuate emarginate in front, the anterior angles produced and subacute; ligula strongly exserted; labial palpi stout, the last joint ovate; maxillary palpi stout, the last joint subsecuriform; mandibles broad, feebly cleft at the apex; antennæ very short, only reaching to the middle of the prothorax, setose, the joints closely articulated, the two basal joints stout, the second joint much shorter than the first, the third joint longer and thinner than the second, joints 4–7 short, about equal in length, and slightly widening outwardly, joints 8–11 distinctly wider and strongly transverse, the eleventh joint slightly narrower than the tenth and rounded at the apex; head very deeply sunk into the prothorax, the epistoma deeply but not broadly emarginate and not defined from the front, the antennary orbits reaching halfway across the coarsely faceted eyes, extending outwardly, and meeting the anterior angles of the prothorax (the eyes appearing at first sight to be completely divided); prothorax closely embracing the elytra, broad, transverse, the apex very deeply arcuate emarginate, the base rounded in the middle and broadly produced, between which and the posterior angles sinuate, and closely ciliated (the fringe of scaly hairs hiding the base of the elytra); scutellum not clearly defined; elytra broad, the width of or scarcely wider (*S. cayennensis**) than the prothorax at the base, widest about the middle, thence rapidly narrowed to the apex, the base obliquely emarginate for the reception of the centre of the base of the prothorax and the inner third distinctly margined; legs short, coarsely asperate and setose; tibiæ rather slender, the anterior pair slightly flattened and with the outer apical angle produced into a very strong broad tooth, the apex of which is bluntly rounded (as in certain South-American *Phaleriæ*); tibial spurs strong, rather short; tarsi spinous beneath, similar in both sexes, the first joint of the posterior pair a little longer than the second and third united; epipleuræ distinct to the last ventral suture, very narrow and almost obsolete beyond; prosternum broad, declivous behind, the apex slightly produced; middle coxæ widely separated, the mesosternum broadly but not deeply emarginate; intercoxal process broad, rounded at the apex; trochantin distinct; form broad ovate, the upper surface densely clothed with scales and very short scattered decumbent hairs. Winged.

This genus, undescribed till now, contains two Tropical-American species, one of which appears to be widely distributed and extends into our country as far north as Northern Mexico. The two species are closely allied; both are of small size, broad ovate form, the upper surface densely clothed with grey or brownish scales, the anterior

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* **Scaptes cayennensis.**

Scaptes cayennensis, Dej. Cat. 3rd edit. p. 215[1].

Narrower and more shining than *S. squamulatus*; dark reddish-brown; the upper surface (when denuded of scales) not so regularly punctured; the elytra (in the Cayenne example) very feebly or obsoletely costate and with irregular rows of small granular elevations, the surface clothed with light brown or cinereous scales and with numerous decumbent hairs; beneath shining, closely and muricately punctured; the rest as in *S. squamulatus*.

Length 4½ millim.

Hab. Guiana, Cayenne[1] (*coll. F. Bates*); ? Chili (*coll. F. Bates*).

Two worn examples in Mr. F. Bates's collection differ as above from *S. squamulatus*; the locality "Chili" seems to me very doubtful.

tibiæ with the outer apical angle broadly produced. *Scaptes* appears to me to be best placed in the "Trachyscelides," though agreeing in some of its characters with the "Hopatrides;" it would seem to approach the North-American genus *Ammodonus*, Muls. (a genus known to me from description only), in many of its characters.

1. **Scaptes squamulatus.** (Tab. X. figg. 6; 6 *a*, labium; 6 *b*, maxilla and maxillary palpus.)

Broad oval, moderately convex, the entire uppor surface (when denuded of scales) dull black and closely and somewhat irregularly punctured, densely clothed with light grey or brownish scales (often more or less variegated with lighter patches or spots) and scattered short decumbent club-like hairs; prothorax rounded at the sides, the sides converging anteriorly from the middle, the anterior angles broad and very prominent though obtuse, the posterior angles subrectangular, the lateral margins finely denticulate, the entire base fringed with short golden-brown hairs; scutellum shining; elytra closely and regularly punctured (more regularly and closely than the prothorax), without traces of striæ, with numerous rows of very short, decumbent hairs, and (in clean fresh examples) with about three or four interrupted rows of light grey and brownish spots (the light and dark spots being placed alternately in the same row); beneath dark reddish-brown or piceous, slightly shining, coarsely and rather closely muricately punctured, each puncture bearing a short cinerous or golden decumbent hair.

Length $4\frac{1}{3}$–6 millim.

Hab. Mexico, Presidio (*Forrer*), Vera Cruz (*Sallé*); Nicaragua (*Sallé*), Chontales (*Belt*); Panama, Tolé (*Champion*).—Colombia (*coll. F. Bates*); Amazons, Santarem (*H. W. Bates*).

The numerous specimens before me from the above localities appear to me to represent one rather variable species; some examples have the rows of light and dark spots much more clearly indicated, one of which, from Chontales, is figured; Amazonian specimens agree well with others from Central America.

I met with this species not uncommonly at Tolé, beneath stones on the open savannas of the low country.

Group **BOLITOPHAGIDES.**

This group is represented in our country by a few species, all but one of which appear to be undescribed; not a single species has hitherto been recorded from Central America. These species are contained in three genera, one of which is described as new. In *Calymmus* and *Ozolais* the third and fourth ventral segments have not the usual distinct coriaceous hind margin.

The different species are found beneath bark or in fungoid growths on trees.

Eutomus, Lac. (= *Rhipidandrus*, Lec.), represented by one or two species in Mexico and Guatemala, was formerly included in this group by Leconte and Horn; more recently, however (*cf.* Class. Col. N. A. p. 232), these authors have included it in the Cioidæ; Lacordaire placed it in the Scolytidæ; *Eutomus* may be known from the "Bolitophagides" by the four-jointed tarsi and the structure of the antennæ.

XENIUS.

Mentum small, trapeziform, longitudinally raised in the middle, the sides deflexed; ligula broadly exserted; labial palpi very stout; last joint of the maxillary palpi triangular, broad; mandibles truncate at their apex; head long, broad, not deeply sunk into the prothorax, the epistoma broadly truncate in front and distinctly defined, similar in both sexes, the antennary orbits rounded and reaching halfway across the rather narrow eyes; antennæ 11-jointed, gradually widening outwardly, the first joint rather stout and ovate, the second very short, the third more than twice as long as the second, the fourth and fifth shorter, the sixth rather wider and subtriangular, the seventh and eighth broader and shorter, the ninth and tenth transverse, the eleventh twice the length of the tenth and rounded at the apex; prothorax rather broader than long, the apex deeply and broadly emarginate, the anterior angles very prominent, the base strongly bisinuate and closely embracing the elytra, the lateral margins crenulate; scutellum large, scutiform, not entering the middle of the base of the prothorax; elytra convex, broad, very much wider than the prothorax at the base, the humeri broadly rounded, with irregular rows of coarse smooth tubercles; legs long, stout, coarsely roughened; tibiæ slightly curved at the apex, the spurs very short and almost obsolete; tarsi clothed with silky hairs beneath, the first joint of the posterior pair rather longer than the second and third united, the last joint longer than the three others together; prosternum broad, horizontal, margined within, the apex produced and received by the broadly concave face of the mesosternum; intercoxal process broad, rounded; epipleuræ very broad at the base, narrowing behind, and abruptly ending at the last ventral suture; upper surface tuberculate, glabrous; third and fourth ventral segments with distinct coriaceous hind margin.

This genus will be readily identified from our figure; it contains a single species from Nicaragua. I can suggest no near ally to *Xenius*, though an undescribed genus from Colombia slightly approaches it; the genus should be placed near *Bolitophagus*.

1. **Xenius scabripennis.** (Tab. X. figg. 7; 7 *a*, labium; 7 *b*, maxilla and maxillary palpus.)

Dull black, glabrous. Head coarsely and shallowly rugulose; prothorax widest before the middle, the sides slightly sinuate before the base and with about five or six crenatures, the anterior angles very prominent, broad, and much produced, the posterior angles subacute, but not outwardly directed, the disc with a very broad, transverse, sinuous depression before the base and a shallow central groove, the surface coarsely but shallowly rugulose, and with some small longitudinal elevations on each side of the anterior disc, the broad basal depression almost smooth; scutellum shallowly and finely punctured; elytra more shining than the prothorax, subparallel, widest a little beyond the middle, thence obliquely narrowing to the apex, with irregular rows of rather coarse rounded shining tubercles and numerous sinuous rows of impressions (the latter are shallowly impressed towards the suture, but become deeper and coarser towards the sides); legs and antennæ black; ventral surface shining, finely and shallowly punctured, and longitudinally wrinkled.

Length 8 millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt, Janson*).

Four examples.

CALYMMUS.

Calymmus, Dej. Cat. 3rd edit. p. 215; Pascoe, Ann. & Mag. Nat. Hist. 4th ser. viii. p. 349 (1871).

Some few species of this Tropical-American genus are known; one of these is generally distributed in our country, whence we now add another species. *C.* (*Toxicum*) *berardi*, Montr., from Lifu, belongs to another genus. *Calymmus* may be known by

the long stout horn, projecting horizontally over the head, on the front of the thorax in both sexes.

1. Calymmus cucullatus.

Calymmus cucullatus, Pascoe, Ann. & Mag. Nat. Hist. 4th ser. viii. p. 349, t. 14. f. 8[1].
Calymmus asperulus, Pascoe, loc. cit. p. 350[2].

Hab. Mexico, Tehuantepec (*Sallé*), Cerro de Plumas (*Höge*); Guatemala, San Gerónimo, San Joaquin, Balheu (*Champion*); Nicaragua, Chontales (*Belt, Janson, coll. F. Bates*); Panama, Volcan de Chiriqui (*Champion*).—Colombia[2] (*coll. F. Bates*); Brazil, Rio Janeiro[1].

Judging from the long series of examples before me, amongst which individuals are to be found of a comparatively longer form, and others in which the thoracic horn is rather more expanded and sub-bifurcate at the apex, I do not think *C. cucullatus* and *C. asperulus* (described from single examples and the types of which I have examined) can be maintained as distinct, some of our specimens being intermediate.

I met with this insect sparingly in Guatemala and the State of Panama, beneath loose bark.

2. Calymmus variegatus. (Tab. X. fig. 8.)

Elongate, subparallel, black, variegated with greyish-ochreous scales. Head with the antennary orbits greatly swollen, raised, and subangularly extended in front; antennæ with the closely articulated tenth and eleventh joints large and stout; prothorax as long as broad, the sides very coarsely crenulate, scarcely narrowing anteriorly, the anterior angles very prominent and extended forwards as far as the front of the eyes, the posterior angles broad and subacute and outwardly directed, the disc gibbous, with a distinct central groove and two stout irregular tubercular elevations on each side about the middle, the horn in front long and stout and shovel-shaped at the apex, the surface (like the head) densely and uniformly clothed with greyish-ochreous scale-like hairs and with scattered smooth bare granular elevations; scutellum rounded; elytra long, convex, the width of the prothorax at the base, parallel for two thirds of their length, with three more or less interrupted tubercular ridges (the first distant from the suture and more strongly raised towards the base), numerous rows of impressions (coarse outwardly, finer and shallower within the first ridge), and some scattered granular elevations along the suture and towards the sides, the surface with scattered patches of greyish-ochreous scales; tarsi long.
Length 10–11½ millim.

Hab. Nicaragua, Chontales (*Belt, coll. F. Bates*).

Four examples. This species is nearly allied to two undescribed South-American forms, which, to prevent future confusion, are perhaps best noticed here *.

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* **Calymmus scabriculus**, sp. n.

Form of *C. variegatus*; the prothorax less coarsely and more regularly crenulate at the sides, slightly narrowing anteriorly, the tubercular elevations on the disc smaller, the horn only slightly widening at the apex, the small granular elevations much more numerous, the surface less densely clothed with scales; the elytra with the ridges not so well defined, much more interrupted, and formed of coarser tubercles, a row of rather coarse tubercles along the suture (feebly represented in *C. variegatus*), the scattered granular

OZOLAIS.

Ozolais, Pascoe, Journ. Ent. ii. p. 457 (1866); Ann. & Mag. Nat. Hist. 4th ser. viii. p. 351 (1871).

A single species only, *O. scruposa*, Pascoe, from the Amazons, was originally placed in this genus by the describer, the same author subsequently (Ann. & Mag. Nat. Hist. 5th ser. xi. p. 437) adding two others, *O. divisa* and *O. gibbera*, from the same locality; we have now to add four more from Central America. In one of these, *O. elongata*, the antennæ are 11-jointed, or rather the last two joints, which are more or less connate in the other species, exhibit a distinct dividing suture (though closely articulated and formed much as in *Calymmus*); in *O. lutosa* the suture is indicated, and in *O. nodosa* also, but very indistinctly; in *O. verrucosa* there is no visible suture. This character alone, judging from the material before me, unless supported by other characters, can scarcely be considered of generic value. In the male of some species, *O. elongata*, *O. nodosa*, &c., the head is armed with a conical tubercle in the middle of the epistoma in front and a transverse elevation (prolonged into a horizontal flattened plate, the apex of which is widened on each side, in *O. elongata*) on the vertex. *Ozolais* is nearest allied to the North-American genus *Bolitotherus*, Cand. (= *Phellidius*, Lec.), from which it will be readily known by the clavate antennæ; the entire upper surface, as in *Bolitotherus*, is coarsely and irregularly tuberculate and densely clothed with greyish-brown scale-like hairs; the elytra in some species, *O. verrucosa* and *O. divisa*, exhibiting rows of impressions which are plainly visible between the elevations.

1. **Ozolais verrucosa.** (Tab. X. fig. 9.)

Broad, subparallel, brownish-black, the upper surface coarsely tuberculate and clothed with scale-like hairs. Head with several small scattered conical tubercles between the eyes, the antennary orbits swollen and rounded; antennæ 10-jointed, ferruginous, the first joint long and stout, the second small and short ovate,

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elevations coarser and more numerous, the rows of punctures more irregular and more shallowly impressed; tarsi long.

Length $9\frac{1}{2}$–$11\frac{1}{2}$ millim.

Hab. Ecuador (*Buckley*).

Two examples in Mr. F. Bates's collection.

Calymmus vestitus, sp. n.

Closely allied to *C. variegatus*; the prothorax formed almost as in that species, the posterior angles subrectangular, the horn wider at the apex (the apex concave within); the elytra with the ridges as in *C. scabriculus* (but formed of more rounded and more distantly placed elevations), the rows of punctures very coarsely impressed outwardly, shallower towards the suture; tarsi shorter and stouter than in *C. variegatus* and *C. scabriculus*.

Length $10\frac{1}{2}$–11 millim.

Hab. Peru, Chanchamayo; Brazil (*coll. F. Bates*).

Two examples.

the third joint about half as long again as the second, joints 4–8 short, the eighth a little wider than the seventh, the ninth joint about twice the length and width of the eighth, the tenth broader and much longer than the ninth, rounded at the apex and without visible suture; prothorax broader than long, the sides slightly rounded, coarsely crenulate (about nine crenatures on each side), converging gradually from the base, and with a very abrupt deep notch on each side (into which the subacute humeri partially enter) just behind the very prominent posterior angles, the anterior angles broad and extending forwards, the surface (like the head) densely clothed with light greyish-brown scale-like hairs, the disc strongly gibbous, irregularly tuberculate, with a deep central groove and numerous conical smaller tubercles; elytra subparallel to beyond the middle, slightly narrowed at the extreme base, scarcely narrower than the widest part of the prothorax, each with about four or five rows of scattered coarse rounded tubercles, between which are other smaller conical elevations (which towards the sides become much more numerous and sharper, the lateral margins appearing coarsely denticulate) and numerous rows of coarse longitudinal impressions, the entire surface sparingly clothed with reddish-brown scale-like hairs; tarsi rather short, the last joint only slightly widening outwardly, more or less red.

Length 5½ millim.

Hab. PANAMA, Bugaba (*Champion*).

One example. This species is closely allied to *O. scruposa*, Pasc.* (a typical example of which has been lent me by the describer), but comparatively broader, the notch on each side of the thorax deeper and more abrupt, the tubercles on the disc more numerous, finer, and more conical in shape, the rows of punctures on the elytra much more distinctly impressed and continued to the suture.

2. **Ozolais lutosa.** (Tab. X. fig. 10.)

Broad ovate, subparallel, brownish-black, the upper surface very coarsely tuberculate and clothed with brown scale-like hairs. Head reddish-brown, the antennary orbits strongly swollen and subangularly extended; antennæ ferruginous, the eight basal joints infuscate in the middle, the first joint long and stout, joints 2–8 ovate, the third joint half as long again as the second, the fourth the length of but a little wider than the second, joints 5–7 equal, the eighth subtriangular and a little broader than the seventh, the ninth very much wider and longer than the eighth and also subtriangular, the tenth wider and much longer than the ninth, rounded at the apex, and with a faint indication of a dividing suture; prothorax wider than long, the sides irregular, slightly rounded, converging gradually from the base, coarsely crenulate and with about two deeper excisions, the anterior angles broad, very prominent, and directed forwards, the disc very strongly gibbous and with two large tuberculiform elevations (upon which are other smaller tubercles), the elevations divided by a deep central groove, the rest of the surface irregular and with small scattered granular tubercles; elytra rather short, a little narrower than the prothorax at the base, widest behind the middle, transversely gibbous, with irregular rows of coarse scattered rounded tubercles (on the top of each of which is a small bare rounded granular prominence), between which are other smaller conical elevations and towards the sides numerous coarser angular elevations; beneath slightly shining, irregularly punctured; prosternum slightly produced.

Length 7 millim.

Hab. COSTA RICA, Cache (*Rogers*).

One example.

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* The figure of this insect (*cf.* Journ. Ent. ii. t. 18. f. 1) is very badly drawn, the deep notch on each side of the thorax and the larger tubercles on the thorax and elytra not being indicated.

3. **Ozolais nodosa.**

Broad ovate, subparallel, brownish-black, the upper surface coarsely tuberculate and clothed with greyish-brown scale-like hairs. Head with the antennary orbits swollen and extended laterally; a small longitudinal elevation in the centre of the epistoma in front and a stronger transverse one on the vertex in the male; antennæ much as in *O. lutosa*, the tenth joint exhibiting a dividing suture (the apical portion narrowed); prothorax rather broader than long, the sides obliquely converging from the base, irregularly crenulate, and with a broader irregular prominence on each side about the middle, the anterior angles broad and directed forwards, the hind angles broad and directed outwards, disc strongly gibbous (as in *O. lutosa*), the surface (the discal elevations especially) with numerous scattered small bare granular tubercles; elytra rather short, distinctly narrower than the prothorax at the base, subparallel to beyond the middle, with irregular rows of coarse tubercles, upon each of which is a small bare granular elevation (the tubercles smaller, more conical, and more numerous at the sides); beneath slightly shining, irregularly punctured; prosternum distinctly produced; legs, antennæ, and oral organs more or less ferruginous.

Length $6\frac{1}{4}$ millim. (♂.)

Hab. NICARAGUA, Chontales (*Belt*).

One male example. Shorter than *O. elongata*, the sides of the thorax more oblique, the club of the antennæ differently formed, &c.

4. **Ozolais elongata.** (Tab. X. figg. 11, ♂; 11 *a*, antenna; 11 *b*, side view of the head.)

Elongate, subparallel, black, the upper surface coarsely tuberculate and densely clothed with greyish-brown scale-like hairs. Head with the antennary orbits swollen, raised, and extended laterally; a stout conical tubercle in the centre of the epistoma in front and a broad horizontal plate (widened out on each side at the apex) on the vertex in the male, a transverse elevation (upon which are two smooth granular prominences) on the vertex in the female; antennæ 11-jointed, the first joint very stout and long, the second joint short and subglobose, the third ovate and about twice the length of the second, the fourth much shorter than the third, joints 5–7 slightly shorter than the fourth and about equal, the eighth joint the length of the seventh but a little wider at the apex and subtriangular, the ninth joint about twice the length and breadth of the eighth, widening a little outwardly, subquadrate, and rather widely separated from the tenth, the tenth joint the width of the apex of the ninth, distinctly divided in the middle (the subconnate eleventh joint clearly visible) into a broad transverse piece and a narrower portion rounded at the apex, ferruginous, the intermediate joints more or less infuscate; prothorax not much broader than long, the sides narrowing from the base, coarsely and irregularly crenulate, and slightly constricted before and strongly so behind the middle, the anterior angles broad and projecting forwards, the posterior angles broad and directed outwards, the disc strongly gibbous (as in *O. lutosa*), the entire surface with scattered small bare granular tubercles (which are much more crowded and numerous on the discal elevations); elytra long, about the width of the prothorax at the base, subparallel to beyond the middle, with irregular rows of large and small rounded tubercles (the larger elevations more widely separated and placed principally on the disc) upon each of which is a small bare granular prominence; beneath slightly shining, longitudinally wrinkled; prosternum slightly produced.

Length 8–9 millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*coll. F. Bates, Belt*).

Three examples. This species will be identified by the structure of the antennæ, and by the cephalic armature of the male.

Group **GONIADERIDES.**

This group is represented in Central America by two genera only; the South-American *Phymatestes* (*Phymatodes*, Blanch.), *Gamaxus*, and *Æmymone* contain as yet no representative in our country. *Xanthicles* is noteworthy on account of the completely divided eyes and Caraboid facies. The "Goniaderides" are connected with the "Heterotarsides" by several more or less intermediate forms. The group is almost confined to the tropical regions of the New World, though one genus, *Ædiatorix*, has been described from Java.

GONIADERA.

Goniadera, Perty, Del. anim. art. Brasil. p. 62 (1830); Blanchard, Hist. Nat. Ins. ii. p. 35 (1845); Lacordaire, Gen. Col. v. p. 391; F. Bates, Trans. Ent. Soc. London, 1868, p. 315, nota.
Goniodera, Castelnau, Hist. Nat. Ins. Col. ii. p. 238 (1850); Gemm. & Har. Cat. vii. p. 1988.

This genus contains numerous Tropical-American species, fully half of which are undescribed as yet; six species inhabit Central America. The nondescript species from Java mentioned by Lacordaire (*op. cit.* p. 392, nota) is probably an *Ædiatorix*. Most of the *Goniaderæ* captured by myself were found by beating the withered still-attached leaves of fallen forest-trees or beneath loose bark.

1. **Goniadera repanda.**

Melandrya repanda, Fabr. Syst. Eleuth. i. p. 165[1].
Gonyodera repanda, Cast. Hist. Nat. Ins. Col. ii. p. 138[2].
Goniadera repanda, F. Bates, Trans. Ent. Soc. Lond. 1868, t. 15. figg. 6 *a–c*.

Hab. Mexico, Tepanistlahuaca (*Sallé*), Playa Vicente (*Höge*); British Honduras, Belize (*Blancaneaux*); Guatemala, Panzos (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*); Panama (*coll. F. Bates*), Volcan de Chiriqui, Tolé (*Champion*).—Colombia, Bogota; Guiana, Cayenne[2]; Brazil[2]; South America[1].

A wide-ranging species. The large number of specimens before me vary considerably in the shape and sculpture of the thorax, and also in the sculpture of the elytra, but I think they can only be regarded as representing one variable species. *G. impressa*, Er., from Peru, would appear to be closely allied to *G. repanda*, but has the thorax more acutely angled at the sides before the middle, and with three impressions before the base, the elytra costate, &c.

2. **Goniadera dissipata.**

Goniadera dissipata, Kirsch, Berl. ent. Zeit. 1866, p. 197[1].

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).—Colombia, Bogota[1] (*coll. F. Bates*); Amazons.

3. **Goniadera oculata.** (Tab. X. fig. 12.)

Reddish-brown, shining, clothed with widely scattered erect hairs. Head broadly and transversely excavate in front, very irregularly punctured (the concave portion closely and more finely, the rest very sparingly), the intraocular space with four or five impressions only in the middle, the eyes comparatively very large and coarsely faceted; antennæ, the two basal joints excepted, closely punctured and dull; prothorax about as long as broad, rather flat, the sides expanded and broadly and subangularly extended before the middle, thence narrowing and sinuous to the base, the anterior angles very broad and rounded and extending forwards, the hind angles distinct and obliquely truncate, the surface very sparingly and irregularly punctured, the punctures not very coarse and more numerous towards the base; elytra broad, rather depressed on the disc, narrowly and regularly costate from the base to the apex, the sixth interstice well defined outwardly by a sharp ridge extending from the shoulder almost to the apex, the interstices each with two rows of moderately coarse impressions; beneath shining, sparingly and finely punctured along the sides and anterior margins of the ventral segments.

Length 18 millim.

Hab. NICARAGUA, Chontales (*Belt*).

One example. The comparatively very large eyes, the closely punctured antennæ, the short transverse excavation on the head, the dilated lateral margins of the thorax, and the regularly and narrowly costate elytra are characteristic of this insect.

4. **Goniadera nicaraguensis.** (Tab. X. fig. 13.)

Black, shining, clothed with widely scattered erect hairs. Head with numerous coarse scattered punctures, transversely excavate in front; prothorax rather broader than long, comparatively narrow, the sides angularly extended before the middle, thence narrowing slightly to the base, the anterior angles very prominent and rather broadly extending forwards, the hind angles obtuse and obliquely truncate, the surface with scattered very coarse irregular punctures which are coarser than those upon the head; scutellum almost smooth; elytra with numerous interrupted rows of short longitudinal smooth elevations (the elevations not clearly defined towards the suture, except posteriorly, and shorter, more numerous, and more conical in form outwardly); beneath shining, the metasternum and ventral surface with fine widely scattered shallow punctures, the ventral segments at the sides with scattered coarse shallow impressions.

Length 13½ millim.

Hab. NICARAGUA, Chontales (*Janson*).

One example. This species will be identified by the very coarsely sculptured upper surface, the numerous interrupted rows of short longitudinal elevations on the elytra, and the comparatively narrow thorax.

5. **Goniadera pilosa.** (Tab. X. fig. 14.)

Goniadera pilosa, F. Bates in litt.

Black, shining, the upper surface thickly, the under surface sparingly, clothed with long erect dark greyish-brown hairs. Head coarsely, irregularly, and somewhat closely punctured, transversely excavate in front; prothorax rather broader than long, the sides angularly extended before the middle, thence obliquely narrowing and sinuous to the base, the anterior angles broadly extending forwards and very prominent, the posterior angles very obtuse and obliquely truncate, the surface coarsely, irregularly and rather closely punctured; elytra with traces of shallow longitudinal grooves, the surface irregularly, moderately coarsely, and not very closely punctured; beneath smoother and more shining, the metasternum and ventral surface with fine widely scattered punctures, the sides and anterior margins of the ventral segments with numerous coarse impressions; legs and the basal half of the antennæ also clothed with long erect hairs.

Length 16–17½ millim.

Hab. NICARAGUA, Chontales (*Belt, Janson, coll. F. Bates*); PANAMA, Volcan de Chiriqui (*Champion*).

Six examples. The two individuals from the State of Panama have the upper surface more sparingly and more coarsely punctured, the shallow elytral grooves more distinctly impressed, and the thorax less angularly extended at the sides; they cannot, however, be regarded as representing more than a variety of the Nicaraguan insect. *G pilosa* will be known from its allies by its very hairy upper surface.

6. **Goniadera alternata.** (Tab. X. fig. 15, ♂.)

Goniadera alternata, F. Bates in litt.

Black, shining, clothed with short scattered hairs, the inequalities of the rough úpper surface (of the head and thorax especially) often more or less filled with earthy-looking scales. Head short, coarsely and rugulosely punctate (the punctures more or less confluent), shallowly impressed transversely in front; antennæ short, slightly passing the base of the prothorax, the second joint strongly transverse; prothorax transverse, the sides broadly extended just before the middle, thence narrowing and sinuous to the base, the anterior angles broad and produced in front, the hind angles rather sharp and prominent and directed outwards, the lateral margins slightly expanded and crenulate, the base broadly truncate in the middle and emarginate on each side just within the angles, the surface rough and covered with irregular, more or less granular tubercles; elytra comparatively short, broad, depressed on the disc, with narrow, more or less interrupted, longitudinal ridges alternating with rows of short longitudinal elevations, the interstices coarsely, irregularly, and rather closely punctured; beneath shining, sparingly and finely punctured; legs short, the anterior tibiæ in the male with a broad tooth on the inner side before the apex.

Length 11–13 millim. (♂ ♀.)

Hab. MEXICO (*Sallé*); BRITISH HONDURAS, Belize, R. Sarstoon (*Blancaneaux*); GUATEMALA (*coll. F. Bates*), Senahu, San Juan in Vera Paz, Las Mercedes (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

A widely distributed though apparently rare species. *G. alternata* agrees perfectly in general structure with *G. interrupta*, from Pebas, Peru, described at great length by Mr. F. Bates (*cf.* Trans. Ent. Soc. Lond. 1868, pp. 312 & 313, t. 15. f. 3), and some undescribed South-American species; it will be known at once from *G. interrupta* by the different sculpture of the elytra, *e. g.* longitudinal slightly interrupted ridges alternating with rows of short longitudinal elevations, the interspaces much more evidently punctured. An example from Senahu is figured.

XANTHICLES.

Mentum much as in *Goniadera*, longer than broad, widening from the base, but little rounded at the sides, the anterior angles prominent, longitudinally carinate in the middle; last joint of the maxillary palpi broadly securiform (as in *Goniadera*), that of the labial palpi short and broad ovate; mandibles cleft at the apex; antennæ very stout, joint 2 very short and strongly transverse, 3 short, about as broad as long, and twice as long as 2, joints 4–6 distinctly wider, subequal, and each nearly twice as long as 3, 7–10 widening a little outwardly, 11 longer than 10, abruptly and obliquely truncate at the apex, the outer apical angle slightly produced; head much as in *Goniadera*, but not swollen on each side behind the eyes, and longer; eyes completely divided at the side, the upper portion much smaller than the lower and oblique; prothorax, scutellum, elytra, and legs as in *Goniadera*, the elytra punctate-striate; epipleuræ broad to the third

ventral suture, thence to the apex narrow; metasternum deeply impressed in the middle behind; surface shining, more or less pilose.

This genus will be at once known from *Goniadera* by the completely divided eyes and the very differently formed antennæ. *Xanthicles* includes two allied species, both of comparatively small size, from Costa Rica; these insects bear a strong superficial resemblance to certain Carabidæ, e. g. *Patrobus*.

1. **Xanthicles caraboides.** (Tab. X. figg. 16; 16 *a*, labium; 16 *b*, maxilla and maxillary palpus.)

Piceous, clothed with scattered erect hairs. Head very coarsely, sparingly, and irregularly punctured, broadly and subtriangularly excavate anteriorly, clothed with numerous erect hairs; prothorax as long as broad, widest anteriorly, the sides strongly constricted behind the middle, thence widening a little to the base, the anterior angles broadly rounded and not produced, the hind angles prominent but obtuse, the extended lateral margins very prominent, the apex broadly and shallowly emarginate in the middle, the base straight, the surface very finely and closely punctured, with numerous widely scattered coarse shallow impressions and a few erect hairs; elytra regularly crenate-striate, the interstices rather broad, smooth, and feebly convex, the humeri with two or three erect hairs; antennæ and legs light reddish-ferruginous; beneath shining, light reddish-brown, very sparingly and shallowly, the epipleuræ very coarsely and irregularly, punctured.

Length 8½ millim.

Hab. Costa Rica, Irazu 6000 to 7000 feet (*Rogers*).

One example.

2. **Xanthicles hirsutus.**

Piceous, somewhat densely clothed with erect testaceous hairs. Head coarsely and subconfluently punctured, deeply impressed transversely in front; protherax as long as broad, widest anteriorly, the sides strongly margined, narrowing to the base, and feebly sinuate behind, the apex feebly emarginate in the middle, the anterior angles broadly and obliquely truncated and not produced, the hind angles rectangular, the base straight, the surface exceedingly finely and closely punctured and with numerous rather closely placed coarse shallow impressions; elytra closely punctate-striate (the punctures transverse, closely and rather irregularly placed), the interstices narrow and uneven, very feebly convex, and irregularly but distinctly punctured; beneath light reddish-brown, sparingly and shallowly, the epipleuræ very coarsely and subconfluently, punctured; legs and antennæ light reddish-ferruginous.

Length 7 millim. (♂.)

Hab. Costa Rica, Cache (*Rogers*).

The more pubescent and differently sculptured upper surface will readily distinguish this species from *X. caraboides*.

Group **HETEROTARSIDES.**

This group, like the preceding, is only represented in Central America by two genera, *Anædus* and *Paratenetus*. The typical Old-World genus *Heterotarsus* is remarkable on account of having one joint less in each of the tarsi—4, 4, 3; in our genera, however, the tarsi are formed as usual. *Anædus* appears to be represented in the Old World by *Lyprops*, a genus also numerous in species. The North-American genus *Pratæus*

and the Tropical South-American *Phobelius* and *Tithassa* have not yet been received from our country.

ANÆDUS.

Anœdus, Blanchard, Hist. Nat. Ins. ii. p. 35 (1845).
Anædus, Lacordaire, Gen. Col. v. p. 396; F. Bates, Trans. Ent. Soc. Lond. 1868, p. 313, note; Horn, Rev. Ten. of Am. north of Mexico, p. 373.
Aspisoma, Dej. Cat. 3rd edit. p. 228.

This is a genus numerous in species in Tropical America, and extending northwards to the Middle United States. By far the majority of the species in collections are undescribed as yet. *A. orientalis*, Motsch., from Mongolia (described from a specimen without antennæ), is, as its author suggests, probably referable to another genus. Nine species inhabit our country; all but one of these appear to be undescribed. The different species vary considerably in the structure of the antennæ; in some the third joint is scarcely longer than the second; in several species these organs are longer in the male than in the female. In one, *A. brevicollis*, the tibiæ are curved and slightly swollen, and the anterior pair armed with a short tooth in the male; in our other species the tibiæ are more or less slender, and similar in both sexes. In *A. brevicollis* and *A. setulosus* the penultimate joint of the tarsi is more distinctly widened than in the other species recorded here. Certain, mostly South-American, forms have the elytra more or less maculated. These insects are found by beating herbage and also on the ground beneath fallen timber or stones. The following table will assist in the determination of the Central-American species :—

Form oblong or elongate ovate, the upper surface more or less depressed.
  Tibiæ slender, unarmed in the male.
    Antennæ with the third joint long, at least more than twice as long as the second . . . . . *punctatissimus, similis, mexicanus, maculatus.*
    Antennæ with the third joint short, as long as or not much longer than the second . . . . . *longicornis, marginatus, apicicornis.*
  Tibiæ slightly curved and swollen, the anterior pair especially, and armed with a small triangular tooth in the male . . . . . *brevicollis.*
Form elliptic, convex . . . . . *setulosus.*

1. Anædus punctatissimus.

Anædus punctatissimus, Blanch., in D'Orbigny's Voyage, vi. pt. 2, p. 198, and Atlas, Ins. t. 14. f. 10[1] *; Lacord. Gen. Col. v. p. 397, note[2]; Dej. Cat. 3rd edit. p. 227[3].

Hab. Mexico, Presidio, Ventanas (*Forrer*), Oaxaca (*coll. F. Bates*), Orizaba, Cordova,

* This figure is very incorrect, as noted by Lacordaire.

Puebla (*Sallé*), Jalapa (*Höge*); GUATEMALA, San Joaquin, San Gerónimo, Capetillo, Aceytuno, Cerro Zunil (*Champion*); NICARAGUA, Managua (*Sallé*), Chontales (*Belt*, *Janson*); COSTA RICA (*Van Patten*); PANAMA (*coll. F. Bates*), Volcan de Chiriqui, Bugaba (*Champion*).—COLOMBIA; BOLIVIA [1 2]; BRAZIL [2 3].

A common species throughout our region. The series of about seventy specimens before me vary considerably in size and in the intensity of the elytral punctuation; in very many examples the elytra are closely and equally punctured throughout, in others more shallowly and sparingly towards the apex; the elytra also vary in length, in most of the specimens from Orizaba (as in the one from Panama) they are comparatively short, in those from San Joaquin comparatively long: a short series from San Gerónimo are considerably smaller in size; two from Cerro Zunil are very large, equalling the largest of the South-American specimens in Mr. F. Bates's collection; our examples vary in size from 6½–11 millimetres. These different varieties are connected by numerous intermediate forms; they cannot, in my opinion, be satisfactorily separated. The antennæ are rather stouter in some examples; the tibiæ slender and unarmed in both sexes. I met with this insect pretty commonly in various localities, from the sea-level to an elevation of 5000 feet; it is found chiefly in wooded districts.

2. **Anædus similis.**

Rather broader than *A. punctatissimus*; the prothorax more constricted behind, very much more coarsely and sparingly punctured, the base distinctly impressed on each side just within the rather more acute hind angles; the elytra still more coarsely punctured.

Length 8½–10 millim. (♂ ♀.)

Hab. MEXICO, Orizaba (*Höge*); GUATEMALA, San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*).

Six examples, differing as above. In one of these the thorax is marked with red at the sides, and the elytra have an ill-defined patch of red on each side behind the middle; as in *A. punctatissimus*, the punctuation of the elytra varies, and is coarser and closer in some examples. The antennæ are rather longer and more slender in the male than in the female. An allied form is found at Ega.

3. **Anædus mexicanus.** (Tab. X. fig. 17.)

Oblong ovate, rather short, brownish-piceous, shining, sparingly clothed with rather long suberect hair. Head rather coarsely but not very closely punctured, transversely impressed in front; eyes large; antennæ comparatively rather short, moderately stout, ferruginous, joint 2 very short and transverse, not half the length of 3, joints 3 and 4 subequal, joints 5–10 slightly widening outwardly and equal in length, joint 11 longer than 10 and narrowed at the apex; prothorax transverse, the sides rounded anteriorly, abruptly narrowed and sinuate behind, the anterior angles broadly rounded, the lateral margins extended and prominent, the base obliquely impressed on each side just within the produced and very acute hind angles, the surface sparingly, regularly, and coarsely punctured; scutellum with a few scattered fine punctures;

elytra rather short, shallowly, coarsely, and somewhat closely punctured; legs rather stout, ferruginous.

Length $5\frac{1}{3}$–$5\frac{1}{2}$ millim.

Hab. MEXICO, Cordova (*Sallé*).

Two examples. This species is allied to and of the size of the North-American *A. brunneus*, Zieg., but with the thorax differently formed—*e. g.* the lateral margins more expanded, the sides more rounded, the hind angles much more acute, the base distinctly impressed on each side, and the disc much more sparingly punctured; the third joint of the antennæ very much longer, the legs longer, &c. *A. rotundicollis*, Lec., from the desert of the Gila River of Arizona, is probably also another ally of *A. mexicanus*.

4. Anædus maculatus.

Oblong ovate, brownish-piceous, slightly shining, the upper surface clothed with short decumbent hairs. Head broadly and transversely impressed in front, coarsely and closely punctured on the vertex, the intraocular space with a few scattered coarse impressions, the epistoma more finely punctured; antennæ comparatively short, not very stout, joint 2 short, about half the length of 3, joint 4 the length of but rather wider than 3, joints 4–10 slightly widening outwardly and almost equal in length, joint 11 longer and rather wider than 10, obliquely and bluntly rounded at the apex, ferruginous, the middle joints darker; prothorax strongly transverse, the sides obliquely and sinuously narrowed before and behind the middle, rather more narrowed posteriorly, the lateral margins narrow and not extended, the anterior angles obtuse, the hind angles acute and outwardly directed, the surface very coarsely and closely punctured; scutellum smooth; elytra rather short, coarsely and closely punctured (not quite so closely as the prothorax), the punctures here and there transversely confluent, piceous, the shoulders broadly, a transverse band (not reaching the suture) on each side beyond the middle, and a patch on each side (not reaching the suture) just before the apex, obscure reddish-testaceous; legs and oral organs reddish-testaceous.

Length $3\frac{1}{2}$ millim.

Hab. PANAMA, David in Chiriqui (*Champion*).

One example. This little species is allied to *A. apicicornis*, but with totally different antennæ, differently formed thorax, the elytra comparatively shorter and maculated.

5. Anædus longicornis.

Elongate ovate, reddish-brown or piceous, shining, sparingly clothed with long erect hair. Head very coarsely, irregularly, and subconfluently punctured, transversely impressed in front; antennæ rather stout, long, in the male reaching to the middle of the elytra, in the female shorter, ferruginous, joint 2 small and strongly transverse, joint 3 short, not twice as long as 2, and about as broad as long, joint 4 more than twice as long as 3 in the female, three times as long in the male, joints 5–10 about equal in length in the female, in the male gradually lengthening outwardly, joint 11 longer than 10, still longer in the male, obliquely subtruncate at the apex; prothorax strongly transverse, the sides rounded anteriorly, abruptly narrowed and sinuate behind, the lateral margins extended and prominent, the anterior angles broadly rounded, the hind angles subrectangular and rather acute, the surface very coarsely, irregularly, and not very closely punctured; scutellum smooth; elytra rather long, coarsely, confusedly, and rather closely punctured, and with a regular row of closely placed punctures along the suture, the shoulders, and the sides less distinctly paler; legs slender, light ferruginous. (♂ ♀.)

Length 5–$6\frac{1}{4}$ millim.

Hab. MEXICO, Capulalpam, Guanajuato (*Sallé*); GUATEMALA, near the city (*Champion*)

Eight examples. In the male of this species the antennæ are distinctly longer, and the apical joint more elongate, than in the female; the tibiæ are slender and unarmed in the male, and similar in both sexes.

6. **Anædus marginatus.** (Tab. X. fig. 18.)

Elongate ovate, brownish-piceous, shining, clothed with a few widely scattered erect hairs. Head with a few scattered coarse impressions, transversely impressed in front; antennæ very long, stout, ferruginous, joint 2 very short and strongly transverse, joint 3 short, longer than 2, and rather broader than long, joint 4 more than twice as long as 3, joints 4–10 long and very slightly lengthening outwardly, joint 11 much longer than 10, slightly widening outwardly, and with the apex obliquely subtruncate; prothorax strongly transverse, the sides subangularly extended about the middle, thence rapidly and obliquely narrowing and sinuous to the base, rounded and scarcely narrowing anteriorly, the lateral margins slightly extended and prominent, the anterior angles broadly rounded, the posterior angles distinct but not acute, the surface very irregularly, coarsely, and rather distantly punctured; scutellum smooth; elytra rather long, strongly margined, coarsely and closely punctate-striate, the interstices smooth and feebly convex, piceous, the sides and base broadly and indefinably sordid testaceous, the shoulders still paler; legs long and slender, testaceous.

Length 4 millim. (♂.)

Hab. Panama, David in Chiriqui (*Champion*).

One example. This small species will be known amongst its allies by its long legs and antennæ, anteriorly widened thorax, and seriate-punctate elytra, the margins of the latter sordid testaceous. Of the Central-American species it is nearest allied to *A. longicornis.*

7. **Anædus apicicornis.** (Tab. X. fig. 19.)

Oblong ovate, brownish-piceous, slightly shining, the upper surface rather thickly clothed with long, suberect hair. Head coarsely and subconfluently punctured, broadly and transversely impressed in front, the anterior part red; antennæ long, stout, thickly clothed with short hair, joints 2 and 3 very short, strongly transverse, subequal, and together not nearly equalling the fourth joint in length, joint 4 more than three times as long as 3, joints 4–10 very slightly widening outwardly and almost equal in length, joint 11 longer than 10 and bluntly rounded at the apex, the three basal joints and the apical one red, the rest piceous; prothorax strongly transverse, the sides strongly and obliquely narrowing before and behind the middle, rather more narrowed posteriorly, and constricted just before the base, the lateral margins slightly extended and prominent, the apex broadly but not deeply arcuate emarginate, the hind angles narrow and acute, the surface very coarsely and closely punctured; scutellum coarsely punctured; elytra rather long, coarsely and closely punctured (not quite so closely or coarsely as the prothorax), the punctures here and there transversely confluent and submuricate, the sides and base (the shoulders more prominently) indefinably reddish, the disc piceous; legs and oral organs reddish-testaceous.

Length 3½ millim.

Hab. Panama, David in Chiriqui (*Champion*).

One example. A very distinct little species.

8. **Anædus brevicollis.** (Tab. X. fig. 20, ♂.)

Oblong ovate, broad, brownish-piceous, shining, clothed with a few scattered suberect hairs. Head exceedingly coarsely, irregularly, and distantly punctured, transversely impressed in front, the anterior half red; antennæ stout, comparatively short, joint 2 very short and transverse, joint 3 rather more than twice as long as 2, joint 4 slightly longer than 3, joint 5 shorter than 4, joints 5–10 widening outwardly and equal

in length, joint 11 longer than 10, widening outwardly and abruptly truncate at the apex, very closely punctured, black, the three basal joints partly red and smoother; prothorax very strongly transverse, about twice as broad as long, the sides rounded anteriorly, moderately narrowed and sinuate behind, the lateral margins broadly extended and impressed within, the anterior angles broadly rounded, the base broadly and shallowly impressed just within the rectangular hind angles, the disc with a shallow central groove (perhaps accidental), the surface exceedingly coarsely and irregularly and not very closely punctured, the space between the punctures finely wrinkled in places, the disc piceous, the sides broadly and indefinably red; scutellum smooth; elytra broad, subparallel, widest behind the middle, broadly rounded at the apex, the entire surface coarsely, confusedly, and rather closely punctured (much more finely than the prothorax), reddish-castaneous; legs rather short and stout; penultimate joint of the tarsi broadly widened; tibiæ in the male slightly curved and swollen, the anterior pair more strongly and very distinctly widened from a little beyond the middle to the apex and with a small triangular tooth on the inner side before the middle, the posterior pair finely serrate within.

Length 7 millim. (♂.)

Hab. GUATEMALA, Cubilguitz (*Champion*).

One example. This species will be readily known by the structure of the tibiæ and the castaneous elytra.

9. **Anædus setulosus.** (Tab. X. fig. 21.)

Elliptic, convex, dark reddish-brown or piceous, shining, somewhat thickly clothed with long decumbent hairs and scattered erect longer hairs. Head very coarsely, irregularly, and rather distantly punctured, transversely impressed in front; eyes large, coarsely faceted; antennæ stout, comparatively short, thickly clothed with hairs, joint 2 small, joint 3 about twice as long as 2, joint 4 longer and rather stouter than 3, joints 4–10 equal in length and slightly widening outwardly, joint 11 longer than 10, ovate, bluntly rounded at the apex, closely punctured, black, the three basal joints smoother and red; prothorax strongly transverse, about twice as broad as long, rounded at the sides, narrowed and sinuous behind the middle, the lateral margins extended, the anterior angles broadly rounded, the base bisinuate and shallowly impressed on each side just within the acute hind angles, the surface exceedingly coarsely, irregularly, and not very closely punctured, an ill-defined smooth longitudinal space on the disc; scutellum smooth; elytra comparatively very convex, rounded at the sides, widest a little before the middle, thence narrowing to the apex, coarsely, closely, and irregularly punctured, the punctures more or less muricate and towards the sides confluent, the interspaces outwardly and at the apex irregularly wrinkled, and here and there raised and subtuberculate; legs rather short and stout, similar in both sexes, ferruginous, more or less stained with piceous, the penultimate joint of the tarsi broadly widened.

Length 6–7 millim. (♂ ♀.)

Hab. PANAMA, Bugaba, David (*Champion*).—COLOMBIA, Bogota? (*coll. F. Bates*).

Var. The elytra towards the sides and apex with numerous small, smooth, scattered, longitudinal, subconical elevations.

Hab. NICARAGUA, Chontales (*Belt*).

Numerous examples of the type, three of the variety. A hairy, convex species, of elliptical form, with comparatively short and stout legs and antennæ. The specimens from Nicaragua, differing as above described, probably represent a local variety of the same species. *A. setulosus* cannot be compared with any other species of the genus described here. An allied form is found in Brazil, specimens of which in Mr. F. Bates's collection are labelled with the manuscript name *Aspisoma fuscicorne*. This species is an *Aspisoma*, according to Lacordaire's definition (Gen. Col. v. p. 397), a genus

not considered by that author, nor by the present writer, to be distinct from *Anœdus*. A typical example from David is figured.

PARATENETUS.

Paratenetus, Spinola, Essai monogr. sur les Clérites, ii. p. 116 (1844); Motschoulsky, Bull. de Moscou, xli. pt. 2, p. 192; Horn, Rev. Ten. of America north of Mexico, p. 373.

This New-World genus was included by Spinola in the Cleridæ, and placed near *Corynetes*. Subsequent writers (Erichson, Motschoulsky, Leconte, and Horn) have placed it in the Tenebrionidæ, in the group "Heterotarsides"; it is not noticed by Lacordaire. Two species only were known to Spinola; Motschoulsky (*loc. cit.*) in a synoptical table has given brief characters for a number of additional species from North and South America, some of which probably will never be identified, and one has been described by Leconte from the Northern United States and Canada. The males* of all the species known to me have the anterior tibiæ armed with a sharp tooth in the middle beneath (scarcely visible from above) and often the intermediate and posterior tibiæ more or less denticulate or toothed within; in *P. villosus* there is also a strong blunt tooth at the extreme base of the anterior femora beneath. In two species examined (*P. villosus* and *P. tibialis*) I find the second joint of the labial palpi to be stout and ovate, much stouter than the apical joint; we give a figure of the labium of *P. villosus*. An allied genus, *Tithassa*, Pasc., is found in Brazil. *Paratenetus* bears a strong superficial resemblance to the genus *Corticaria*. These insects are numerous in Central America, whence we now record twelve species. The different species are found upon herbage or by beating the withered still-attached leaves of fallen forest trees.

The following table will assist in the identification of the Central-American species:—

- Club of the antennæ exceedingly stout, still stouter in the male, black.
  - Species large; the elytra slightly constricted before the apex . . . . . *tibialis*.
  - Species small; the elytra oblong oval (form of *Corticaria*) . *grandicornis*.
- Club of the antennæ very stout, still stouter in the male, ferruginous . . *ruficornis*.
- Club of the antennæ moderate, similar in both sexes, piceous.
  - Elytra comparatively long, confusedly punctured.
    - Species of large size . . . . . *villosus*.
    - Species smaller.
      - The sides of the thorax rather coarsely crenulate . . *punctatus*.
      - The sides of the thorax more finely crenulate.
        - Form oblong ovate . . . . . *corticarioides*.
        - Form obovate . . . . . *obovatus*.
  - Elytra comparatively long, the punctures arranged in irregular rows towards the sides . . . . . *crenulatus*.

* The sexes do not appear to have been identified by previous writers; apparently the female only was known to Spinola.

Elytra shorter, subseriate-punctate . . . . . *brevipennis.*
Elytra irregularly tuberculate and more convex . . . . . *tuberculatus.*
Club of the antennæ small, ferruginous; species very small in size.
Sides of the thorax coarsely denticulate . . . . . *denticulatus.*
Sides of the thorax armed with very short teeth, or simply crenulated . . . . . *tropicalis.*

1. **Paratenetus tibialis.** (Tab. X. fig. 22, ♂.)

Rather convex, reddish-brown, rarely piceous, sparsely clothed with rather long erect hair. Head coarsely and closely punctured, transversely impressed in front; antennæ stout, rather long, with the three joints of the club greatly widened in both sexes (these joints coarsely punctured), still stouter and broader in the male, black, the basal joints often more or less reddish; prothorax broader than long, distinctly narrowing anteriorly, widest at or a little before the base, the sides irregularly but not coarsely crenulate, the posterior angles acute, the anterior angles not very prominent, the surface rather coarsely punctured (not quite so closely or coarsely as the head), the disc often darker; elytra widening from the base, widest a little beyond the middle, thence obliquely narrowing, and the apex somewhat produced, strongly margined, a shallow depression on each side of the base just within the shoulders, the surface rather coarsely and irregularly punctured, the punctures finer and not so closely placed on the disc, varying in colour, unicolorous reddish-brown, or (more frequently) piceous with the sides reddish-brown; legs reddish-brown or piceous, rather stout; tibiæ (the intermediate pair especially) slightly curved and swollen in both sexes, in the male the anterior pair armed on the lower side about the middle with a sharp tooth, and the intermediate and posterior pairs denticulate on the inner side and with their inner apical angles sharply produced; beneath shining, sparingly and finely punctured.

Length $4\frac{3}{4}$–$5\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Playa Vicente (*Sallé*), Jalapa (*Höge*); British Honduras, Beliz R. Hondo (*Blancaneaux*); Guatemala, Cahabon, Chiacam, San Juan in Vera Paz, Teleman (*Champion*).

Many examples. In Guatemala I only met with this species on the Atlantic slope, in or near the Polochic valley. This distinct species will be readily known by the very stout black antennal club, the structure of the tibiæ in the male, the shape of the elytra, &c.

A male example from San Juan is figured.

2. **Paratenetus grandicornis.**

Paratenetus grandicornis, Motsch. Bull. de Moscou, xli. pt. 2, p. 193[1].

Hab. Panama, Obispo[1].

The brief characters given by Motschoulsky for this species are as follows:—"Thorax armed laterally with very short teeth or simply crenulated; elytra oblong oval, slightly convex, form of *Corticaria*; club of the antennæ black and greatly dilated, the base clear. Length $\frac{4}{5}$ lin." This species would seem to be allied to *P. tibialis,* though very much smaller and with the elytra differently shaped.

2. **Paratenetus ruficornis.** (Tab. X. fig. 23, ♂.)

Moderately convex, unicolorous reddish-brown, sparsely clothed with decumbent and also with rather long erect hair. Head coarsely and subconfluently punctured, transversely impressed in front; antennæ stout, rather

long, with the three joints of the club much widened in both sexes (these joints finely punctured and the two lower ones transverse), still broader and stouter in the male, entirely ferruginous; prothorax comparatively broad, wider than long, slightly rounded at the sides, distinctly narrowed anteriorly, the sides denticulate (about eight denticles on each side), the angles acute (each formed by one of the lateral denticles), the surface coarsely and subconfluently punctured; elytra widening slightly from the base to beyond the middle, broadly rounded at the apex, narrowly margined, the surface rather coarsely irregularly and somewhat closely punctured, the punctures finer and not so closely placed on the disc; legs moderately stout, ferruginous; anterior tibiæ with a small triangular tooth on the lower side a little beyond the middle, the intermediate tibiæ also with a tooth on the inner side some distance beyond the middle, and the inner apical angles of the two hinder pairs narrowly produced in the male; beneath shining, finely and sparingly punctured.

Length 4–4½ millim. (♂ ♀.)

Hab. Panama, Bugaba (*Champion*).

Numerous specimens. *P. ruficornis* will be identified by its ferruginous antennæ, stout antennal club (in the male about as stout as in the female of *P. tibialis*), the coarsely denticulate sides of the thorax, &c. It is quite possible that *P. lebasi*, Spin. (Essai monogr. Clér. ii. p. 119, t. 44. figg. 6 & 6 *b*), from Colombia, is the female of *P. ruficornis*, but as I cannot reconcile our insect with the figure given I prefer to describe it. Compared with *P. punctatus* the present insect is larger, the antennæ entirely ferruginous and with the club very much stouter, the thorax more narrowed anteriorly, and much more coarsely denticulate at the sides, &c.

4. **Paratenetus villosus.** (Tab. X. figg. 24, ♂; 24 *a*, labium; 24 *b*, maxilla and maxillary palpus.)

Convex, dark reddish-brown, sometimes lighter, somewhat thickly clothed with long erect hair. Head coarsely and subconfluently punctured, transversely impressed in front; antennæ stout, rather long, the club moderately stout, closely punctured, similar in both sexes, and the two lower joints rather broader than long, ferruginous, the club piceous; eyes large; prothorax transverse, widest at or a little before the middle, the sides slightly rounded and narrowing anteriorly, the rather prominent lateral margins irregularly crenulate, the posterior angles acute, the anterior angles obtuse, the base in the middle transversely grooved within, the surface rather more coarsely punctured than the head, the punctures more or less confluent; elytra long, widest beyond the middle, convex, strongly margined, the surface coarsely and rather closely punctured (the punctures coarser, closer, and more or less confluent outwardly) and transversely and irregularly wrinkled towards the sides and apex; legs ferruginous, the femora and tibiæ sometimes infuscate; anterior and intermediate tibiæ slightly curved, the anterior pair armed with a sharp tooth on the lower side about the middle, and the basal half of the latter and of the posterior pair also finely denticulate within, and the anterior femora with a strong blunt tooth at the extreme base beneath in the male.

Length 5¾–6⅓ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*); Guatemala, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

Six examples. This, the largest species of the genus, is allied to *P. punctatus*, but will be known from that insect by its much larger size, the thorax less coarsely crenulate at the sides, the limbs stouter, the club of the antennæ broader and stouter and the two lower joints not so transverse, the more pronounced male characters, &c.

We figure a male example from Jalapa.

5. Paratenetus punctatus.

Paratenetus punctatus, Spin. Essai monogr. Clér. ii. p. 118, t. 44. figg. 5, 5 *b–d*[1]; Horn, Rev. Ten. of Am. north of Mexico, p. 373[2] (nec Motsch.).

Hab. North America[1], Middle and Eastern States[2].—Mexico, Jalapa (*Höge*); British Honduras, R. Sarstoon (*Blancaneaux*).

The six Central-American examples before me agree so closely with Spinola's description and figures, and with an individual from the United States in Mr. F. Bates's collection, that I have little doubt they should be referred to this species. In the male of our insect the tibiæ are more swollen than in the female, the anterior and posterior pairs very slightly, the intermediate ones distinctly, curved; the anterior tibiæ armed (as usual) with a sharp tooth in the middle beneath, the intermediate pair very finely serrate beneath, and with the inner apical angles slightly produced. The club of the antennæ is distinctly piceous. In one or two of our specimens the thorax is more coarsely crenulate at the sides, and the anterior angles more prominent than in others; but I look upon these as varieties only.

Motschoulsky's *P. punctatus* (*cf.* Bull. Mosc. xli. pt. 2, p. 192) is probably another species, as already noted by Dr. Horn (*op. cit.* p. 374).

6. Paratenetus corticarioides.

Moderately convex, reddish-testaceous or reddish-brown, rather thickly clothed with short decumbent hair. Head coarsely and very closely punctured, transversely impressed in front; antennæ rather short, the club (as in *P. punctatus*) not very stout (the two lower joints transverse) and closely punctured, reddish-testaceous, the club (except at the extreme apex) and sometimes the two preceding joints, piceous; prothorax transverse, widest a little before the middle, the sides narrowing a little and slightly rounded anteriorly, the lateral margins prominent and finely crenulated, the posterior angles more or less acute, the anterior angles very obtuse and almost rounded, the surface coarsely and very closely punctured; elytra rather long, coarsely punctured, the punctures closely placed on the disc, confluent towards the sides; legs light ferruginous.

Length $4\frac{1}{3}$–$4\frac{3}{4}$ millim. (♀.)

Hab. Mexico, Juquila (*Sallé*); Guatemala, San Gerónimo (*Champion*).

Three female examples. Allied to *P. punctatus*, but much larger, the sides of the thorax not nearly so coarsely crenulate and more distinctly margined, the surface (possibly abraded) clothed with shorter hair; the antennæ are coloured and the club (though rather stouter) is formed as in that species.

7. Paratenetus obovatus.

Closely resembling *P. corticarioides* and differing as follows:—antennæ rather shorter, the club similarly formed and coloured; the prothorax less narrowed anteriorly, the sides straighter and finely crenulate; the elytra shorter, widening from the base to considerably beyond the middle, broadly rounded at the apex; the legs shorter.

Length $3\frac{1}{2}$–$3\frac{3}{4}$ millim. (♀.)

Hab. British Honduras, Belize (*Blancaneaux*).

Three examples. This species will be known from *P. corticarioides* by the compara-

tively shorter legs and antennæ, the elytra widened behind (the general form in consequence being obovate), &c.; the upper surface is similarly clothed with short decumbent hair, amongst which a few longer hairs are here and there to be seen.

8. **Paratenetus crenulatus.**

Moderately convex, reddish-brown, slightly stained with piceous, clothed with rather long decumbent hair. Head coarsely and subconfluently punctured, transversely impressed in front; antennæ ferruginous, the club piceous, moderately large, and with the two lower joints transverse; prothorax broader than long, widest about the middle, the sides slightly rounded, and about equally narrowed at the base and apex, the lateral margins rather coarsely crenulate, the anterior angles obtuse, the posterior angles acute, the surface punctured like the head; elytra widest behind the middle, the surface with numerous shallow transverse rather coarse punctures, which towards the sides are arranged in more or less interrupted longitudinal rows, the sutural region smoother, the interspaces towards the sides irregularly wrinkled; legs more or less ferruginous.

Length $3\frac{2}{3}$ millim. (♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Two female examples. *P. crenulatus* is not very closely allied to any other species here described; it will be known by the irregular rows of shallow punctures on the sides of the elytra and the coarsely and confluently punctured thorax. The elytra are much more closely punctured and wrinkled in the specimen from the Volcan de Chiriqui.

9. **Paratenetus brevipennis.**

Moderately convex, reddish-brown, stained with piceous, clothed with long erect hair. Head coarsely and confluently punctured, transversely impressed in front; antennæ rather long, with a moderately stout, loosely articulated 3-jointed club, ferruginous, the club (except at the extreme apex) piceous; prothorax transverse, feebly rounded at the sides, widest in the middle, about equally narrowed at the base and apex, the angles acute, the sides crenulate, the surface punctured like the head; elytra comparatively broad and short, much broader than the prothorax, slightly rounded at the sides, with irregular interrupted rows of very coarse punctures, the sutural region more finely and sparingly punctured; legs rather stout, reddish-testaceous, the femora and tibiæ stained with piceous; tibiæ slightly curved, the anterior pair armed on the inner side a little before the middle with a sharp tooth, and the inner apical angles of the intermediate pair distinctly (those of the posterior pair slightly) produced, in the male.

Length $3\frac{1}{2}$ millim. (♂.)

Hab. Panama, David in Chiriqui (*Champion*).

One example.

10. **Paratenetus tuberculatus.** (Tab. X. fig. 25, ♂.)

Convex, reddish-brown or piceous, rather thickly clothed with long cinereous erect hair. Head coarsely and closely punctured, transversely impressed in front; antennæ similar in both sexes, the club stout, coarsely punctured, and with the two lower joints broader than long, more or less piceous, the basal joints (and sometimes the extreme apex of the club) ferruginous; eyes comparatively large, coarsely faceted; prothorax broader than long, widest about the middle, the sides slightly rounded and narrowed anteriorly, the lateral margins prominent and coarsely crenulated, the anterior angles obtuse, the posterior angles acute, the base transversely grooved within in the middle, the disc with an irregular curved or sinuous depression on each side, the surface very coarsely, closely, and irregularly punctured, the punctures confluent at the sides; elytra very convex, slightly rounded at the sides, widest beyond the middle, the apex

broadly rounded, the surface closely covered with short and very irregular longitudinal or sinuous smooth elevations, the space between the elevations irregularly and coarsely wrinkled, the sutural region rather smoother; legs (the femora and tibiæ especially) rather slender, reddish-brown or piceous; anterior tibiæ in the male armed with a sharp tooth on the lower side about the middle, the hinder pairs simple.

Length $4\frac{3}{4}$–$5\frac{1}{2}$ millim. (♂ ♀.)

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Numerous examples. *P. tuberculatus* will be readily identified by its convex form, large eyes, tuberculate elytra, and rather slender legs; the anterior tibiæ in the male armed with a sharp tooth.

11. **Paratenetus denticulatus.** (Tab. X. fig. 26, ♀.)

Moderately convex, reddish-testaceous, pubescent. Head short, extending very narrowly at the base on each side behind the eyes (the eyes at first sight appearing angular behind), shallowly impressed transversely in front, very closely and rather finely punctured; antennæ short, the joints of the club small (the two lower joints transverse), testaceous, the club scarcely darker; prothorax transverse, widest a little before the base, widely denticulate at the sides, the denticles closer and shorter behind the middle, the front denticle (forming the anterior angle) the largest and directed backwards, the surface closely and rather finely punctured; elytra widening a little from the base to beyond the middle, finely and not very closely punctured; legs short.

Length $2\frac{2}{3}$ millim. (♀.)

Hab. PANAMA, Bugaba (*Champion*).

This small species is possibly allied to *P. tropicalis*, Motsch., but with the sides of the thorax strongly denticulated, and the club of the antennæ differently formed. The single example before me is abraded and in a bad state of preservation. *P. denticulatus* closely resembles a species of *Corticaria*.

12. **Paratenetus tropicalis.**

Paratenetus tropicalis, Motsch. Bull. Mosc. xli. pt. 2, p. 193[1].

Hab. PANAMA, Obispo[1].

This species is compared by Motschoulsky to *P. grandicornis*, and is described as having "the club of the antennæ testaceous and smaller, the upper surface covered with punctures and sparsely clothed with long hairs; the length $\frac{5}{6}$ lin." *.

Group **CNODALONIDES.**

Most of the Tropical South-American genera, *Campsia* and a few others excepted, have at least one representative in our country. The majority of the species are of large size and mostly of brilliant, more or less metallic colours; a large number of those contained in collections still remain undescribed. The "Cnodalonides" are confined to the tropical regions of the Old and New World, and to Australia and New Zealand; America north of Mexico has no representative. Several new genera have been required

* Too late for insertion here I have discovered in the collection several additional small species of *Paratenetus*; they will be included in the Supplement.

for the Central-American species. *Nautes* and *Tarpela*, placed in this group by their describers, are here referred to the "Helopides."

The different species are chiefly found by beating the branches of decaying forest trees, or upon herbage on the margins of the forest; doubtless the earlier stages are passed in decaying timber.

CYRTOSOMA.

Cyrtosoma, Perty, Del. anim. artic. Brasil. p. 59 (1830); Lacordaire, Gen. Col. v. p. 418.
Cnodalon, Castelnau, Hist. Nat. Ins. Col. ii. p. 229 (partim).

This Tropical-American genus is represented in Central America by two species, one of which (*C. denticolle*) is the largest and most typical of the known forms, and characteristic of our region. In *Cyrtosoma*, at least in our species, the mandibles are cleft at the apex, and not truncate as in most of the genera of "Cnodalonides."

These insects are found beneath the loose bark of decaying forest trees and also by beating dead branches.

1. **Cyrtosoma denticolle.** (Tab. XI. fig. 1.)

Cyrtosoma denticolle, Chevr. Petites Nouv. Ent. ii. p. 273 [1].

Hab. Mexico, Cordova (*Sallé*); British Honduras, Belize (*Blancaneaux*); Guatemala [1], Lanquin, San Juan in Vera Paz, Chacoj, Teleman, Panzos, Cerro Zunil (*Champion*); Nicaragua (*Sallé*), Chontales (*Belt, Janson*); Costa Rica (*Sallé*); Panama (*coll. F. Bates*), Chiriqui (*Ribbe*), Volcan de Chiriqui, Bugaba, David (*Champion*).—Colombia, Bogota.

A common species throughout our country, and extending southwards into Colombia; *C. denticolle* is found from the sea-level up to an elevation of 4000 feet. Allied forms, *C. atrum*, Serv., and *C. unicolor*, Perty, are found in South America.

2. **Cyrtosoma decem-lineatum.** (Tab. XI. fig. 2.)

Oblong ovate, broad, convex, black, rarely reddish-brown, shining. Head shallowly, finely, and sparingly punctured, transversely impressed in front; prothorax strongly transverse, slightly and about equally narrowed at the base and apex, strongly margined, the sides broadly and shallowly emarginate before the rounded anterior angles, still more feebly so about the middle, and also just before the subacute hind angles, the base strongly margined, the surface very shallowly, finely, and sparingly punctured; scutellum smooth; elytra convex, finely punctate-striate, the striæ not very deeply impressed, the interstices flat, exceedingly finely and almost imperceptibly punctured, the alternate ones red from the base—the first (or sutural) to the apex, the third and seventh united a little before the apex and enclosing the abbreviated fifth, the ninth also abbreviated behind, the first, third, and fifth united at the base, and the seventh and ninth also a little below the shoulder; beneath shining, the ventral surface longitudinally wrinkled and sparingly punctured; prosternum horizontal, longitudinally grooved on each side, the apex strongly produced and received by the deeply excavate V-shaped mesosternum.

Length 8–10½ millim.

Hab. Mexico, Cordova (*Sallé*); British Honduras, Belize (*Blancaneaux*); Nicaragua, Chontales (*Belt, Janson, coll. F. Bates*); Panama, Bugaba (*Champion*).

Numerous examples. This species is allied to *C. cruentatum*, Chevr., and *C. lineatum*, Perty, from Cayenne; it will easily be known by red alternate interstices of the elytra. We figure an example from Bugaba.

OTHRYONEUS *.

Mentum trapezoidal; last joint of the labial palpi ovate, truncate at the apex, that of the maxillary pair moderately broad, subsecuriform; mandibles cleft at the apex; ligula strongly exserted; head short, deeply sunk into the prothorax, the epistoma very short, not very clearly defined, broadly truncate in front, and separated from the prominent labrum by a membranous clypeus, the antennary orbits slightly swollen and projecting a little beyond the epistoma in front; eyes small, transverse, convex, widely separated; antennæ short, not reaching the base of the prothorax, the seven outer joints broader, the sixth to the tenth transverse, the eleventh longer than the tenth and rounded at the apex; prothorax transverse, very strongly margined, the margins reflexed, the apex broadly arcuate emarginate, the base strongly bisinuate; scutellum large, scutiform; elytra closely embracing, and wider than, the prothorax, long, subparallel, with regular rows of fine punctures, narrowly margined; legs rather short, finely punctured, the tibiæ slender; basal joint of the posterior tarsi very short, equal to the two following joints united, about half the length of the apical one; tibial spurs short, but distinct on all the legs; prosternum horizontal, grooved on each side, the apex produced; mesosternum narrowly raised, V-shaped, and deeply concave within in *O. maculipennis*, concave in *O. erotyloides*; metasternum long; intercoxal process rather broad, rounded in front; epipleuræ extending to the apex of the elytra; form oblong ovate or elongate ovate, subparallel; body glabrous, winged.

This genus includes two species, one from Colombia † and one from Nicaragua. In *Othryoneus* the head is formed much as in *Cyrtosoma*; amongst its allies the genus will be known by its elongate shape, the strongly margined broad thorax, the complete epipleuræ, the short but distinct tibial spurs, the comparatively narrow apical joint of both the maxillary and labial palpi, the cleft mandibles, the very lightly punctate-striate elytra, &c. The two species somewhat resemble Erotylidæ, and indeed have the elytra maculated as in various Tropical-American species of that family inhabiting the same region; both are unique. I am unable to detect any external sexual characters; possibly both the specimens are females. An allied undescribed South-American genus is contained in Mr. F. Bates's and in the British Museum collection.

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* The species described below as *O. maculipennis* stands in Mr. F. Bates's collection under a MS. generic name which I would adopt were it not already in use.

† **Othryoneus maculipennis.**

Shorter and less parallel than *O. erotyloides*; the antennæ shorter, with the penultimate joints more transverse, wholly black; the head with a deep transverse impression on each side in front; the prothorax rounded at the sides before the middle, narrowing anteriorly, the sides straight from the middle to the base, black; the scutellum black; the elytra shorter and broader and less parallel than in *O. erotyloides*, the apex broadly rounded, the rows of punctures more shallowly impressed, the punctures placed closer together, the interstices exceedingly finely and sparingly punctured, testaceous, the base in the middle (whence a short oblique streak extends a little way down each elytron), the suture, two large irregular spots (one near the suture, the other near the lateral margins) on each side before the middle, a zigzag band a little beyond the middle (not reaching the suture or lateral margin), and the apical third, black; beneath and the legs black.—Length 12¾ millim.—*Hab.* Colombia, Bogota. A single example in Mr. F. Bates's collection.

1. **Othryoneus erotyloides.** (Tab. XI. figg. 3; 3 *a*, labium; 3 *b*, maxilla and maxillary palpus.)

Elongate ovate, moderately convex, black, very shining. Head very finely and closely punctured, transversely and deeply excavate in front; antennæ black, the two basal joints red; prothorax scarcely narrowing anteriorly, the sides almost straight, the anterior angles broadly rounded, the hind angles slightly produced, prominent, and subacute, a deep rounded fovea on each side in the middle near the lateral margin, the base with a shallow oblique fovea on each side, the disc with a deep transverse impression in the middle just before the base, the surface very shallowly, finely, and sparingly punctured, red, the base in the middle, the middle of the disc partly, and the reflexed margins, black; scutellum smooth, black; elytra long, parallel to beyond the middle, the humeri slightly swollen and impressed within for the reception of the hind angles of the prothorax, with rows of fine shallow punctures which are almost obsolete towards the apex, the interstices smooth and quite flat, reddish-testaceous, the shoulders and part of the base, the lateral margins very narrowly, the suture, a large oblong spot on the disc some distance before the middle, between which and the lateral margin (but a little lower down) is another much smaller spot, a very broad zigzag band (widening inwardly) behind the middle, and the apex rather broadly for some distance along each side of the lateral margin, black; legs black, the base of the anterior femora beneath red; beneath shining, black, the flanks of the prothorax broadly red, the ventral surface reddish-brown, finely and sparingly punctured, the ventral surface longitudinally and very evidently, the space between the eyes very coarsely and transversely, wrinkled.

Length 13¾ millim.

Hab. NICARAGUA, Chontales (*Janson*).

CAMARIA.

Camaria, Saint-Fargeau & Serville, Encycl. Méthod. x. p. 454 (1825); Lacordaire, Gen. Col. v. p. 423.

Cameria, Castelnau, Hist. Nat. Ins. Col. ii. p. 231.

This genus contains many closely allied species, the majority of which existing in collections are still undescribed. *Camaria* is confined to tropical regions, but is far more numerously represented in the New than in the Old World; the Tropical-American species do not greatly differ from those of the Old World; in the New World the genus ranges from Brazil to the Colombian State of Panama, whence one species is now recorded.

1. **Camaria parallela.** (Tab. XI. fig. 4, ♂.)

Elongate ovate, moderately convex, rather narrow, brownish-bronze, shining. Head finely, shallowly, and sparingly punctured, a long oblique groove on each side (forming a continuation of the lateral limit of the epistoma) extending posteriorly as far as the eyes and continued transversely across the intraocular region, enclosing a large triangular flattened and depressed space; antennæ long, slender; prothorax transverse, the sides rather strongly margined, broadly and very shallowly emarginate a little before the middle, scarcely narrowing anteriorly, straight behind, the anterior angles broadly rounded, the hind angles subrectangular, the base bisinuate, the disc with a shallow rounded impression in the middle behind, the surface very shallowly, finely, and sparingly punctured; scutellum shallowly punctured; elytra long, parallel to beyond the middle, the humeri swollen and shallowly emarginate, punctate-striate, the striæ deeply impressed and very closely, finely, and shallowly punctured, the interstices feebly convex, almost impunctate; legs reddish-brown or bronzy, the knees and tarsi bluish-black; the slightly curved anterior and intermediate tibiæ dilated (the intermediate pair very broadly and abruptly) at their inner apices, and the three basal joints of the anterior tarsi broadly dilated in the male; prosternum narrow,

acuminate, horizontal, the apex much produced and received by the deeply concave V-shaped mesosternum; beneath shining, brownish-æneous, the ventral surface longitudinally wrinkled.

Length 23½ millim. (♂.)

Hab. PANAMA, Bugaba (*Champion*), Chiriqui (*Trötsch*).

This species is allied to the undescribed *C. æraria*, Dej., of South America; in the structure of the head it approaches *C. clandestina*, Pasc., from Parà.

Two examples, both males.

BLAPIDA.

Blapida, Perty, Del. Anim. artic. de Brasil. p. 58 (1830); Castelnau, Hist. Nat. Ins. Col. ii. p. 232; Lacordaire, Gen. Col. v. p. 425.

Ryssochiton, Gray, in Griffith's Animal Kingdom, Ins. ii. t. 50. fig. 4, & t. 69. figg. 2 *a–f* (descr. nulla).

This genus contains about six species, all of large size; three only have been described as yet. *Blapida* is confined to the tropical regions of the New World; one species is now known to inhabit Central America; the genus ranges from the Amazon valley to Guatemala. The different species bear a certain superficial resemblance to the Buprestidæ; all have the apex of each elytron produced into a sharp spine.

1. **Blapida neotropicalis.** (Tab. XI. fig. 5, ♂.)

Dull greenish-bronze, rarely reddish-brown tinged with green. Head very finely and closely punctured, the vertex more sparingly so; prothorax broader than long, subquadrate, scarcely narrowing anteriorly, the sides straight from the middle to the base, the anterior angles rather broadly rounded, the posterior angles rectangular, the surface exceedingly finely and rather sparingly punctured; elytra deeply striate, the striæ in some examples very closely, finely, and subtransversely punctured throughout, in others obsoletely so towards the suture, the interstices slightly convex, smooth, dull greenish-yellow in light-coloured fresh examples, obscure brownish-olivaceous in dark-coloured faded specimens, the striæ more or less stained with grass-green, the terminal spines strong and darker in colour; legs varying in colour—red, reddish-brown, or dark bronze; intermediate tibiæ widened on the inner side at the apex in the male; beneath dark bronze, shining, almost imperceptibly punctured.

Length 18-21 millim. (♂ ♀.)

Hab. GUATEMALA, El Jicaro in Vera Paz (*Champion*); NICARAGUA, Chontales (*Belt*, *Janson*, *coll. F. Bates*).

Numerous examples. We figure a light-coloured male from Chontales. An allied undescribed species is found in Southern Colombia.

MOPHON.

Mophon, F. Bates in litt.

Mentum trapezoidal, deflexed at the sides; last joint of the labial palpi very broad, rounded at the apex, that of the maxillary pair broad and securiform; mandibles truncate at the apex; head large, not deeply sunk into the prothorax, the epistoma short, well defined, broadly truncate in front, and separated from the prominent labrum by a membranous clypeus, the antennary orbits slightly swollen and rounded externally;

eyes very large, not widely separated, rounded, slightly oblique, the inferior portion smaller; antennæ long, slender, joint 1 stout and rather long, 2 small, short, about as broad as long, 3 three times as long as 2 and swollen towards the apex, 4 rather shorter than 3 and of similar shape, joint 5 the length of 4, joints 5–10 equal in length, scarcely widening outwardly, joint 11 longer than 10 and acuminate at the apex, the four basal joints glabrous and almost smooth, the others finely punctured and pubescent; prothorax transverse, deeply bisinuate at the base, very strongly margined; scutellum large, scutiform; elytra broad, considerably wider than the prothorax, subparallel to beyond the middle, thence obliquely narrowing to the subacuminate apex, the shoulders slightly swollen and rounded, strongly margined, transversely gibbous in the middle, the posterior half broadly flattened, regularly punctate-striate; legs long and slender, smooth; tibiæ slender, the anterior pair distinctly shorter than the others, and thickly clothed with fulvous hair on the inner side from about the middle to the apex in the male, more sparingly so in the female; tibial spurs very short, obsolete from the anterior pair; tarsi thickly clothed with silky hair beneath, the four hinder ones very long and slender, the anterior pair much shorter and stouter, the first joint of the posterior pair very long and slender, longer than the apical one in the male; the anterior tarsi in the male with four joints only, the first joint large and swollen and formed by the anastomosed first and second joints, in the female five-jointed; prosternum broad, horizontal, the apex acuminate and much produced and received by the deeply concave mesosternum, the anterior face of which is strongly raised and tuberculate on each side; metasternum long, broadly transversely declivous behind; intercoxal process broad, triangular; epipleuræ abruptly ending at the last ventral suture; body glabrous, metallic, winged.

This new genus is remarkable on account of the very long and slender intermediate and hind legs (their tarsi being especially slender), and the above-described structure of the anterior tarsi in the male. This structure is identically the same in the numerous male examples before me; in all, the first and second joints are closely anastomosed into one large solid piece without visible suture, the anterior tarsi thus being four-jointed only in this sex. *Mophon* is not very closely allied to any described genus; it should be placed near *Camaria*. One species only, from Central America, is known to me.

1. **Mophon tinctipennis.** (Tab. XI. figg. 6, ♂; 6 *a*, labium; 6 *b*, maxilla and maxillary palpus.)

Oblong ovate, broad, metallic olive-green, very shining. Head very sparingly and almost imperceptibly punctured, a deep impression on each side before the eyes; prothorax punctured like the head, the base very strongly margined and with a distinct oblique fovea on each side, the sides more or less broadly and very shallowly emarginate in the middle, thence straight to the base, abruptly and very obliquely narrowing anteriorly, the anterior angles very obtuse, the lateral margins strongly reflexed; scutellum smooth; elytra, if anything, widest beyond the middle, with regular rows of coarse impressions from the base to the apex (closely placed towards the base, more distant and consisting of coarse and fine impressions towards the sides and apex), broadly and shallowly depressed on each side at the base and also in the middle behind the scutellum, the interstices quite flat and almost impunctate, the apical half (and sometimes the disc) tinged with purplish-cupreous; beneath bluish-green, almost smooth, the metasternum at the sides transversely, and the ventral surface longitudinally, wrinkled.

Length 18½–21 millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt, coll. F. Bates*); Panama, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Numerous examples.

EPICALLA.

Epicalla, Dej. Cat. 3rd edit. p. 219; Lacordaire, Gen. Col. v. p. 309, nota.

Mentum trapezoidal; last joint of the labial palpi very broad and stout, rounded at the apex, that of the maxillary pair broadly securiform; ligula strongly exserted; mandibles truncate at the apex; head short, rather deeply sunk into the prothorax; epistoma very short, sharply defined posteriorly by a deeply impressed transverse groove (limited on either side in front of the eyes by a deep fovea, the narrow antennary orbits in consequence prominent), truncate and projecting far beyond the orbits in front, separated from the labrum by a more or less distinct membranous clypeus; eyes very large, not widely separated, slightly oblique; antennæ variable, long, with the outer joints longer than broad, or much shorter, with the penultimate joints subtransverse; prothorax transverse, strongly margined, the base bisinuate and with a broad oblique fovea on each side; scutellum large, scutiform; elytra convex, wider than and closely embracing the prothorax at the base, rather long, usually widening to beyond the middle, thence obliquely narrowing to the apex, somewhat strongly margined, a broad oblique impression on each side some distance within the swollen humeri, sometimes transversely impressed on each side just below the base, the latter appearing strongly margined, finely punctate-striate; legs not very stout, shining, finely and sparingly punctured, the femora slightly swollen, the anterior tibiæ in both sexes clothed with short silky hair on the inner side towards the apex; tarsi thickly clothed with silky hair beneath, the anterior pair more or less dilated in the male, the first joint of the posterior pair rather long (longer than the two following joints united), equalling the apical one in length; tibial spurs almost or quite obsolete; prosternum broad, horizontal, the anterior face hollow and declivous, sometimes swollen longitudinally on each side externally between the coxæ, the apex moderately produced and abruptly acuminate; mesosternum more or less concave; intercoxal process broad, rounded or subtriangular in front; epipleuræ ending abruptly at the last ventral suture; form oblong ovate or obovate, convex; body glabrous, highly polished and metallic, winged.

This genus includes the Brazilian *E. subsulcata* of Dejean's Catalogue, various undescribed forms from Venezuela and Colombia, and the three new species from Central America described here. *Epicalla* will be recognized by the characters given; the species are comparatively rather small in size (*E. lata* excepted). The genus should be placed near *Elomosda* and the South-American *Thecacerus.* Other allied undescribed South-American genera exist in collections, one of which contains species superficially resembling *Epitragus.* The three species of *Epicalla* here recorded, though not very closely allied, agree in their chief structural characters. In the South-American *E. subsulcata,* Dej., the male tarsi are very evidently dilated; in the males (the only sex I am able to identify) of our species the tarsi are only moderately dilated.

1. **Epicalla varipes.** (Tab. XI. figg. 7, ♂; 7 *a*, labium; 7 *b*, maxilla and maxillary palpus.)

Oblong ovate, æneous, very shining. Head smooth, impunctate; antennæ long, joint 2 short, about as broad as long, joint 3 nearly three times as long as 2, joint 4 shorter than 3, widening outwardly, joints 5–10 very slightly increasing in length outwardly, longer than broad, joint 11 the width of but longer than 10 and very bluntly rounded at the apex, joints 5–11 finely and closely punctured, dull, and pubescent, the rest smoother and shining, ferruginous; prothorax transverse, very strongly margined, the margins deeply grooved within, widest at the base, the sides sinuate from the middle to the outwardly produced subacute hind angles, slightly narrowing anteriorly, the anterior angles broadly rounded, the disc deeply impressed transversely in the middle behind, and with a shallow central groove ending in a deep longitudinal impression, the basal foveæ deep and connected anteriorly with the discal fovea by a shallow transverse

sinuous groove, the surface with a few widely scattered fine shallow punctures; scutellum smooth; elytra strongly margined, gradually widening to beyond the middle, deeply transversely impressed on each side below the base (the base appearing broadly margined), narrowly and finely punctate-striate, the interstices flat on the disc, subangularly raised towards the apex and less distinctly so at the sides, smooth; femora cupreous, the tibiæ metallic green, the tarsi ferruginous suffused above with metallic green; beneath æneous, very shining, almost impunctate, the ventral surface very finely longitudinally wrinkled; intercoxal process almost rounded in front, margined.

Length 10½–12 millim.; breadth 5 millim. (♂.)

Hab. NICARAGUA, Chontales (*Belt, coll. F. Bates*).

Three examples, apparently all males.

2. **Epicalla lata.** (Tab. XI. fig. 8.)

Obovate, broad, æneous, very shining. Head finely and sparingly punctured, reddish-ferruginous, suffused with æneous; antennæ rather short, joint 3 rather more than twice as long as 2, joint 4 shorter than but much wider than 3, rather longer than broad, joints 5–10 equal, subtransverse, joint 11 longer than 10, widening outwardly, broadly and bluntly rounded at the apex, the eight outer joints somewhat flattened, coarsely rugulose, black, the rest ferruginous and smoother; prothorax transverse, strongly margined, the sides straight and slightly widening from the middle to the base, obliquely narrowing and slightly rounded before the middle, the anterior angles broadly rounded, the hind angles obtusely subrectangular, the basal foveæ broad and irregular, the surface sparingly punctured, the punctures fine but very deeply impressed; scutellum slightly convex, sparingly punctured; elytra broad, widening from the base to considerably beyond the middle, with regular rows of fine, closely-placed, lightly impressed punctures (scarcely striate), which become almost obsolete before the apex, a sharp keel on each side (just within the seventh row of punctures) extending a short distance upwards from the apex, the interstices broad, quite flat (except at the sides) and impunctate, the ninth slightly convex beyond the middle; legs (including the coxæ) ferruginous, the outer half of the last joint of all the tarsi abruptly black; beneath æneous, almost smooth, the head, the sterna, and the ventral surface more or less ferruginous, the latter very finely longitudinally wrinkled.

Length 12½ millim.; breadth 7 millim.

Hab. MEXICO (*Sallé*). One example.

3. **Epicalla cupreo-nitens.** (Tab. XI. fig. 9.)

Obovate, fiery metallic purple, with vivid cyaneous reflections, very shining. Head almost impunctate, purple, the anterior half blue; antennæ as in *E. lata*, but shorter; prothorax very short, strongly transverse, narrowing from the base, the sides rounded anteriorly, very strongly margined, the margins deeply grooved within, the anterior angles broadly rounded, the hind angles prominent but not acute, the disc with a shallow central groove and a transverse impression before the base, the basal foveæ deep and extending forwards, the surface sparingly, finely, and shallowly punctured, purple, the margins and the basal half more or less suffused with vivid cyaneous tints; scutellum longitudinally convex, smooth; elytra widening to considerably beyond the middle, narrowly but deeply striate, the striæ finely and shallowly punctured, the interstices nearly flat on the basal half, subangularly raised and almost keeled at the apex, smooth, the surface of a most vivid fiery cupreous tint without blue reflections, the extreme lateral margins slightly tinged with golden; legs blue; beneath smooth, bluish-purple, the epipleuræ golden-cupreous, the ventral surface finely longitudinally wrinkled.

Length 10 millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

One example. This is one of the most vividly-coloured species of Tenebrionidæ known to me.

MŒON.

Mentum, palpi, and labium much as in *Epicalla*; mandibles cleft at the apex; antennæ rather long, the joints slightly widening and lengthening outwardly, longer than broad, joints 3 and 4 subequal in *M. isthmicus*, joint 4 a little shorter than 3 in *M. panamensis*, each about twice as long as 2, the apical joint much longer than the tenth, not widening outwardly, and subacuminate at the apex; head short, the epistoma limited posteriorly by a more or less deep transverse impression, truncate and projecting beyond the sides in front, separated from the labrum by a membranous clypeus; eyes small, rounded, widely separated; prothorax convex, transverse, the sides strongly, and the base in the middle shallowly, margined, the lateral margins reflexed, narrowly grooved within, and not quite reaching the posterior angles, the base bisinuate, and with a deep fovea on each side; scutellum moderately large, broad, subtriangular; elytra long, convex, broader than the prothorax, narrowly margined, rounded at the shoulders, the humeri distinct but obtuse, subparallel, punctate-striate; legs moderately stout, smooth, the anterior tibiæ on the inner side towards the apex clothed (as in *Epicalla*) with short silky hair, the tibial spurs very short and almost obsolete; the first joint of the posterior tarsi short, the length of the two following joints united, but much shorter than the apical one; prosternum broad, horizontal, longitudinally impressed in the middle, the apex strongly produced and abruptly acuminate; mesosternum concave, the sides narrowly raised; metasternum long; intercoxal process broad, triangular; epipleuræ ending abruptly at the last ventral suture; form oblong ovate, convex; body glabrous, polished and metallic, winged.

This genus, separated by Mr. F. Bates under a preoccupied MS. name, contains two closely allied species from the Colombian State of Panama. *Mœon* may be known amongst its allies by its small, rounded, and widely separated eyes, the cleft mandibles, the structure of the antennæ, the convex thorax (the reflexed lateral margins of which are abbreviated behind and do not quite extend to the posterior angles), the long convex elytra, the shortened epipleuræ, &c.

1. **Mœon isthmicus.**

Oblong ovate, convex, greenish-bronze, very shining. Head finely, shallowly, and sparingly punctured, the front broadly flattened, the transverse impression deep; prothorax strongly rounded at the sides anteriorly, the sides very feebly sinuate (almost straight) behind the middle, the anterior angles rounded, the hind angles thin and subacute, a transverse sinuous groove (shallow on the disc but very deeply impressed at the sides and there confluent with the deep basal foveæ) some distance before the base, the surface very sparingly, shallowly, and finely punctured; scutellum smooth; elytra widest in the middle, subparallel, transversely impressed on each side below the base, narrowly but deeply punctate-striate throughout, the punctures fine and closely placed, the interstices smooth and towards the apex distinctly convex, of a lighter æneous tint than the head and prothorax and without greenish reflections; legs dark greenish-bronze, the antennæ dark ferruginous; beneath dark greenish-bronze, shining, almost smooth, the ventral surface shallowly and irregularly wrinkled.

Length 9 millim. (♂.)

Hab. Panama, Obispo (*Salvin*).

One male example.

2. **Mœon panamensis.** (Tab. XI. figg. 10, ♀; 10 *a*, labium; 10 *b*, maxilla and maxillary palpus.)

Closely resembling *M. isthmicus*, and differing as follows:—The antennæ darker; the prothoracic impressions shallower; the elytra more convex and less parallel, the striæ finer and much more lightly impressed,

still finer and shallower towards the apex, the interstices quite flat throughout; the rest much as in *M. isthmicus*.

Length 8¼–9 millim. (♂ ♀.)

Hab. PANAMA, Bugaba (*Champion*).

Two examples, differing as above.

ELOMOSDA.

Elomosda, F. Bates, Ent. Monthly Mag. vi. p. 273 (1870).

This genus is apparently confined to Central America; it contains a single species of large size. *Elomosda* somewhat closely resembles the genus *Hegemona* of the "Misolampides."

1. Elomosda belti.

Elomosda beltii, F. Bates, loc. cit. p. 275, t. 2. f. 3, ♂[1].

Hab. GUATEMALA, Coban (*Champion*); NICARAGUA, Chontales (*Belt*[1], *Janson, coll. F. Bates*).

ACROPTERON.

Acropteron, Perty, Del. Anim. artic. de Brasil. p. 64 (1830); Lacordaire, Gen. Col. v. p. 426; Mäklin, Monogr. in Act. Fenn. vii. p. 103 (1862).

Arthroplatus, Solier, in Gay's Hist. fisica y politica de Chile, Zool. v. p. 246.

Sphenosoma, Dej. Cat. 3rd edit. p. 233.

This genus contains a large number of closely allied species, all of which are confined to Tropical America; Mäklin, in his Monograph (*op. cit.*), described twenty-two, including two from Central America, and since then none appear to have been recorded. Twelve species inhabit our country, no less than ten of which are described as new. The species are apparently not widely distributed, and seem to be confined to a limited area. A large number of undescribed South-American forms exist in collections. I have not been able to trace for certain a single one of our species south of the isthmus of Panama, nor to identity any of the Central-American species before me, *A. agriloides* excepted, with any of those described by Mäklin. The Central-American species all belong to Mäklin's "Division B," in which the thorax is uninterruptedly margined at the base.

Certain South-American species (*A. rufipes*, &c.) are of a bright metallic green or purple tint (these mostly belong to Mäklin's "Division A," in which the basal margin of the thorax is more or less obsolete in the middle); those inhabiting our country, however, are all more or less of a greenish-bronze or brownish-æneous colour. The males of some species have the underside of the femora (more distinctly so in the South-American forms of Mäklin's "Division A") fringed with short hair beneath *, and the trochanters with a few longish bristles; the posterior tibiæ shallowly or abruptly emar-

* This and the shorter antennæ in the female are the only sexual characters noticed by Mäklin and Lacordaire.

ginate (sometimes thus forming a subtriangular tooth) on the inner side some distance before the occasionally swollen apex, in others the inner face flattened (and dull and slightly concave within) before the middle for a short distance. Modifications of these characters are, however, to be met with in the different species; in some they are almost or quite obsolete. The apical joint of the maxillary palpi in the male is broader and more triangular in shape than in the female in the species I have examined.

The sexual organs of both sexes of *Acropteron* differ greatly from what obtains in the allied genera: in the male the outer horny sheath of the œdeagus is curved downwards at the apex, the apex itself narrowly produced and slightly swollen, and the intromittent organ is extruded from beneath; in the female, instead of the usual horizontal process, there are two long, thin, horny, vertical plates enclosing a central tube, the plates together forming a rather broad, flattened, slightly decurved ovipositor (somewhat similar to that existing in many 'Orthoptera'), the apex of which is more or less pointed. This structure exists in all the species I have examined. The flattened process of the female is no doubt used to guide the eggs into very narrow crevices, probably in the bark of decaying trees; the dissection of the female of a species of the genus *Hegemona* (*H. resplendens*), in which the same sort of ovipositor exists, only even more strongly developed, shows the vaginal opening to be placed immediately above this.

The different species are chiefly found in the forest-region by beating the decaying branches of fallen trees. The males of nine Central-American species are known to me; they may be identified by the following Table :—

Posterior tibiæ for a short distance flattened and feebly concave on the inner side before the middle	*belti, langurioides.*
Posterior tibiæ slightly curved, obliquely widened at the inner apical angle, the outer half slightly concave within	*mäklini.*
Posterior tibiæ shallowly emarginate on the inner side some distance before the apex	*agriloides.*
Posterior tibiæ with a short broad triangular tooth followed by a rounded emargination on the inner side some distance before the apex	*angulicolle, calcaratum.*
Posterior tibiæ with a short broad triangular tooth followed by a rounded emargination on the inner side some distance before the apex, and also widened at the inner apical angle	*longipenne.*
Posterior tibiæ sinuous, unarmed	*mexicanum.*
Posterior tibiæ almost straight, unarmed, scarcely differing from those of the female	*puncticolle.*

1. **Acropteron belti.** (Tab. XI. fig. 11, ♂.)

Rather broad, greenish-bronze, very shining. Head very deeply transversely excavate in front, closely, coarsely, and very irregularly punctured, a rather broad longitudinal space on the vertex impunctate; eyes strongly

transverse; antennæ piceous-black; prothorax broad, the anterior angles broad, swollen, and rounded, the hind angles strongly and acutely produced, the base distinctly emarginate in the middle before the scutellum, the disc broadly transversely impressed behind, the basal foveæ short but deep, the surface comparatively coarsely, sparingly, and very irregularly punctured, a broad longitudinal space on the posterior half of the disc more or less impunctate; elytra broad, narrowing very gradually to some distance beyond the middle, thence more rapidly so to the apex, with rows of shallow fine punctures, the terminal spines rather short; legs smooth, sparingly punctured, brownish-æneous; posterior tibiæ for about one fourth of their length flattened on the inner side before the middle (this space feebly concave and dull within), and the femora glabrous (the trochanters with a few longish bristles) beneath, in the male; beneath very shining, brownish-æneous, the metasternum with numerous scattered coarse impressions, the ventral surface finely and sparingly punctured.

Length 16½–17½ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt*).

Three examples. This is the largest and finest of the Central-American species.

2. Acropteron langurioides.

Closely allied to *A. belti*, and differing as follows:—Smaller and narrower; the head not so deeply excavate, similarly sculptured; prothorax much more finely and shallowly punctured; the elytra distinctly narrower (especially in the male), and narrowing more rapidly from the base; the posterior tibiæ in the male formed as in *A. belti*; the metasternum more sparingly punctured; the rest as in *A. belti*.

Length 14–16 millim. (♂ ♀.)

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Many examples. This species will be easily distinguished from *A. belti* by the above-mentioned characters; the elytra in most specimens are rather more coarsely striate-punctate than in that insect, though the thorax is invariably much more finely punctured; the colour of the upper surface is rather more of a golden-bronze, sometimes the thorax is slightly tinged with cupreous; the transverse depression on the base of the latter is usually deep.

3. Acropteron mäklini. (Tab. XI. fig. 12, ♂.)

Greenish-bronze, shining. Head closely, irregularly, and rather coarsely punctured, transversely excavate in front, a shallow rounded fovea on the vertex; antennæ piceous, the two basal joints and the outer half of the apical one ferruginous; prothorax broader than long, the anterior angles broadly rounded, the posterior angles acutely produced, the sides almost straight, the base shallowly emarginate before the scutellum, the disc very shallowly transversely impressed behind, the basal foveæ short but deep, the surface moderately coarsely, irregularly, and somewhat closely punctured, the punctures not quite so closely placed on the disc; elytra narrowing from the base, with rows of rather coarse punctures, the terminal spines short; legs smooth, sparingly punctured, brownish-æneous, sometimes lighter; posterior tibiæ curved, obliquely widened on the inner side at the apex, and the outer half slightly concave within, and the femora almost glabrous beneath, in the male.

Length 10–11½ millim. (♂ ♀.)

Hab PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Numerous examples. From *A. agriloides* this species will be known by its more sparingly punctured head and thorax, the latter with the basal foveæ more deeply impressed (the disc as in that species very shallowly impressed behind), smoother tibiæ, and male characters.

4. **Acropteron agriloides.** (Tab. XI. fig. 13, ♂.)

Acropteron agriloides, Mäkl. Act. Fenn. vii. p. 121[1].

Hab. MEXICO [1], Cordova, Juquila (*Sallé*), Misantla (*Höge*); GUATEMALA, Zapote, Senahu, Panzos (*Champion*).

In this species the thorax is closely, comparatively coarsely, and subequally punctured, the disc sometimes slightly flattened or shallowly impressed behind, the anterior angles broad, rounded, and not much produced; the elytra with rows of comparatively coarse impressions, the terminal spines short; the tibiæ more or less roughened and punctured, the posterior pair in the male shallowly emarginate on the inner side some distance before the apex. In the long series of Mexican specimens before me the thorax is more rounded at the sides in some examples than in others; a single male from Panzos has the thorax broader (especially anteriorly), and smoother tibiæ; three females from Senahu, however, agree well with those from Mexico.

5. **Acropteron angulicolle.**

Closely resembling *A. agriloides*, and only differing as follows:—The prothorax with more prominent angles, the anterior ones narrowly, subangularly extended (not broad and rounded), the posterior ones more acutely produced, the disc not flattened behind; the posterior tibiæ in the male abruptly and deeply arcuate emarginate (thus forming a triangular tooth) on the inner side some distance before the apex.

Length 10 millim. (♂.)

Hab. NICARAGUA, Chontales (*Belt*).

One male example. This insect cannot be treated as a variety of *A. agriloides*, differing as it does in the shape of the anterior angles of the thorax and the more pronounced male characters.

6. **Acropteron calcaratum.** (Tab. XI. fig. 14, ♂.)

Brownish-bronze, shining. Head coarsely and subconfluently punctured, moderately deeply excavate in front, a distinct longitudinal fovea on the vertex; antennæ piceous; prothorax transverse, the anterior angles produced and rather broadly rounded, the posterior angles acute and outwardly directed, the base feebly emarginate before the scutellum, the basal foveæ short but deep, the disc broadly transversely impressed before the base, the surface coarsely and closely punctured, a longitudinal space on the disc impunctate; elytra scarcely narrowing to some distance beyond the middle, rather wide, with rows of moderately coarse rather shallow punctures, the terminal spines narrowly, obliquely, and acutely produced; legs rather smooth, not very closely punctured, brownish-bronze, the basal two thirds of the tibiæ and the first joint of the posterior tarsi more or less red; posterior tibiæ with a short broad triangular tooth followed by a rounded concave emargination on the inner side beyond the middle, and the four hinder femora strongly fringed with short hairs beneath, in the male.

Length 11–11½ millim. (♂ ♀.)

Hab. GUATEMALA, San Gerónimo (*Champion*).

Four examples. This species will be separated from its allies by the thorax being broadly transversely impressed in the middle behind, the surface coarsely punctured, a longitudinal space on the disc impunctate; the elytra comparatively shallowly punctured; the posterior tibiæ armed with a short, broad, triangular tooth.

7. **Acropteron longipenne.** (Tab. XI. fig. 15, ♂.)

Rather long and narrow, greenish-bronze, very shining. Head irregularly, coarsely, and not very closely punctured, a rather large, somewhat flattened space in the centre of the vertex almost impunctate, moderately deeply excavate in front; antennæ very long, ferruginous, the basal half of each joint more or less infuscate; prothorax broader than long, the anterior angles broadly rounded, the posterior angles acutely produced, the base very feebly emarginate before the scutellum, the basal foveæ shallow, the disc slightly flattened anteriorly and broadly, transversely, and shallowly impressed behind, the surface rather coarsely and somewhat closely punctured, a narrow ill-defined longitudinal space on the disc almost impunctate; elytra very long, rather narrow, narrowing from the base, with rows of comparatively coarse punctures, the terminal spines short; legs smooth, sparingly and shallowly punctured, greenish-bronze, the basal two thirds of the tibiæ, the knees, and the tarsi more or less, reddish-ferruginous; posterior tibiæ with a broad short, subtriangular tooth on the inner side some distance beyond the middle, followed by a shallow rounded emargination, thence to the apex widened, and the femora fringed with short hairs beneath, in the male.

Length 11½ millim. (♂.)

Hab. Guatemala, Capetillo (*Champion*).

One example. A comparatively long, narrow species, not very closely allied to any other described here.

8. **Acropteron mexicanum.** (Tab. XI. fig. 16, ♂.)

Rather broad, dark reddish-brown, not very shining. Head coarsely and confluently punctured, the epistoma and vertex more sparingly so, a large shallow rounded impression on the latter, the frontal excavation moderately deep; antennæ long, ferruginous; prothorax broad, the anterior angles broad and rounded, the posterior angles subacutely produced, the base shallowly emarginate before the scutellum, the basal foveæ short but deep, the disc broadly, shallowly, transversely impressed before the base, the surface coarsely and closely punctured, the posterior half of the disc rather more sparingly so, reddish-brown, suffused with piceous; elytra broad, very gradually narrowing from the base, with rows of comparatively coarse punctures, dark castaneous, the terminal spines acutely and narrowly produced; legs reddish-brown, the femora almost smooth, the tibiæ shallowly punctured, the tarsi thickly clothed with fine silky hair beneath; posterior tibiæ sinuous and unarmed, the four anterior tibiæ clothed with fine silky hair on the inner side from the middle to the apex, and the femora and trochanters clothed with short hair beneath, in the male; beneath reddish-brown, slightly tinged with æneous, rather dull.

Length 12⅔ millim. (♂.)

Hab. Mexico, Santecomapan (*Sallé*).

One example. This species will be known by its dark reddish-brown colour, comparatively broad form, closely and coarsely punctured thorax, and male characters; the tarsi very thickly clothed with silky hair beneath.

9. **Acropteron puncticolle.**

Brownish-bronze, not very shining. Head including the vertex coarsely, very closely, and subconfluently punctured, the transverse excavation moderately deep, a shallow fovea on the vertex; antennæ piceous, the basal joint and the apical one ferruginous; prothorax transverse, the anterior angles slightly produced and obtuse, the posterior angles acute, the disc broadly, shallowly, transversely impressed behind, the base shallowly emarginate before the scutellum, the basal foveæ deep, the surface somewhat coarsely, closely, and subconfluently punctured, the punctures not quite so closely placed on the disc; elytra narrowing from the base, with rows of comparatively coarse punctures, the terminal spines short; legs closely and coarsely, the tibiæ rough and rugosely, punctured, brownish-bronze, the basal halves of the tibiæ more or less ferruginous; posterior tibiæ slightly sinuous, and unarmed within (scarcely differing from those of the

female), and the femora fringed with short hair beneath, in the male; metasternum rather closely and somewhat coarsely, the first three ventral segments comparatively coarsely and rather closely, the other segments more finely, punctured.

Length 9–11 millim. (♂ ♀.)

Hab. PANAMA, Bugaba, Volcan de Chiriqui, David (*Champion*).

Many examples. This species is not very nearly allied to any other described here; it may be known by its rather dull brownish-bronze colour, coarsely and subconfluently punctured thorax, the disc of which is only feebly impressed behind, the comparatively coarsely punctured elytra, and the simple posterior tibiæ in the male; an allied form is found at Rio Janeiro.

10. Acropteron lævipes.

Greenish-bronze, shining. Head rather coarsely, irregularly, and not very closely punctured, the frontal excavation moderately deep; antennæ piceous, the basal joint and the extreme apex red; prothorax with very prominent produced angles, the anterior ones narrowly rounded, the hind ones acute, the disc feebly transversely impressed immediately before the base, the basal foveæ moderately deep, the base almost straight in the middle, the surface closely and rather coarsely, a longitudinal space on the centre of the disc more sparingly, punctured; elytra narrowing from the base, with rows of comparatively coarse and deep punctures, the terminal spines short; legs smooth, very sparingly punctured.

Length 9½ millim. (♀.)

Hab. NICARAGUA, Chontales (*Belt*).

One example. *A. lævipes* will be known amongst its allies by the closely punctured thorax, the angles of which are all very prominent, the comparatively very smooth legs, and other characters given above; it is not very nearly allied to any of the other species noticed here; the male still remains to be discovered.

11. Acropteron rugipes.

Rather broad, dark reddish-brown, with a slight bronzy tint, rather dull. Head including the vertex coarsely and confluently punctured, the epistoma more sparingly so, the vertex obsoletely impressed in the middle, the frontal excavation moderately deep; antennæ brownish-piceous; prothorax broad, the sides almost straight, the anterior angles prominent but obtuse, the posterior angles broad and subacutely produced, the disc without basal depression, the base shallowly emarginate before the scutellum, the basal foveæ short and not extending upwards, the surface very coarsely, closely, and subequally punctured; elytra narrowing very gradually from the base, with rows of rather shallow coarsish punctures, the terminal spines short; legs stout, reddish-brown, the femora smooth and sparingly punctured, the tibiæ rough and coarsely rugulosely punctured; beneath shining, comparatively coarsely punctured.

Length 11 millim. (♀.)

Hab. NICARAGUA, Chontales (*Belt*).

One example. *A. rugipes* will be identified by the very coarsely and closely punctured thorax, which is without basal depression; the coarsely roughened tibiæ; and the rather dull reddish-brown colour, only slightly tinged with æneous. From *A. agriloides* this species will be readily known by the thorax being more quadrate in form, broader, much more coarsely and not quite so closely punctured, and the anterior angles less rounded; the still more roughened tibiæ, comparatively shorter form, and duller and less metallic colour. Like the preceding species, the female only is known.

12. **Acropteron brunneum.**

Acropteron brunneum, Mäkl. Act. Fenn. vii. p. 119[1].

Hab. Costa Rica (*Wagner*[1]).—Brazil[1].

I am unable to identify this species among the large number of Central-American *Acroptera* before me; oddly enough, we have not received a single representative of the genus from Costa Rica. It seems to me very improbable that the insects from Brazil and Costa Rica really represent one and the same species.

Group **ISCHYOMIIDES.**

This new group is proposed for a single species, *Ischyomius singularis*, an insect inhabiting Colombia, including the State of Panama. *Ischyomius* differs in so many important points of structure from the "Cnodalonides," as defined by Lacordaire, that I find it impossible to include it in that group. Though the definition of the "Cnodalonides" now requires extensive modification to include the genera since described, still we do not find the general structure at all agreeing with that of *Ischyomius*. Certain "Cnodalonides," *Platycrepis*, have the two or three penultimate joints of the tarsi laterally compressed and strongly bilobed somewhat as in *Ischyomius*, but the other structural characters differ greatly. The "Ischyomiides" may very possibly have to be removed eventually from the family "Tenebrionidæ."

I do not detect any external sexual difference in *Ischyomius*; the sexual organs are formed much as usual (not in the least resembling *Acropteron*):—in the female, a flattened horizontal process (which may possibly serve the function of an ovipositor), on either side of which and close to the apex is a rather long style; in the male, a long, narrow, pointed sheath.

ISCHYOMIUS.

Ischyomius, Chevrolat, Mitth. des Münch. ent. Ver. ii. p. 98 (1878).

This genus was established upon a very remarkable insect from Colombia, and stated by its describer to be near *Acropteron*. The narrow elongate form, the slender antennæ, the widely separated eyes, and the mucronate apices of the elytra bear, it is true, a superficial resemblance to *Acropteron*, but there the affinity ends, the structure of the oral organs, anterior coxal cavities, tarsi, &c. being wholly different.

The following is Chevrolat's description:—

"*Ischyomius*. Charact. generis:—Corpus elongatum, planum, apice emarginatum bidentatum. Caput latum, apice rotundatum, transversim posticeque sulcatum. Clypeus angustus transversalis. Labrum subquadratum emarginatum, mandibulæ latæ, planæ, arcuatæ, acutæ. Ultimo articulo palporum maxillarum elongato-acuminato. Oculi laterales rotundati. Antennæ submoniliformes, undecim-articulatæ, prothoraci æquilongæ, articulo tertio longiore, 4° paullulum breviore, ultimo ovali. Prothorax subquadratus, planus, lateribus reflexis, postice paullulum attenuatis, angulis quatuor rectis, acutis. Scutellum rotundatum. Elytra basi truncata, ad apicem sensim alternata, subparallela, in angulo marginis spinosa, intus emar-

ginata. Pedes breves, femoribus modice incrassatis, planiusculis, tibiis rectis, tarsis coarctatis latis, primo articulo posticorum longo, conico. Coxæ oblongæ. Abdomen quinque segmentis subæqualibus, ultimo dimidio longiore. Prope G. *Acropteron*."

To this I would add:—

Mentum exceedingly wide and short, more than twice as broad as long, widest in front, the anterior angles rounded, the base and apex very broadly truncate, the sides slightly constricted before the base; ligula very broad, emarginate; labial palpi widely separated at the base, the last joint small, short; outer lobe of the maxillæ comparatively very long, narrowing and acuminate at the apex, the inner lobe armed with a distinct tooth within; last joint of the maxillary palpi rather long, feebly subsecuriform (scarcely elongate acuminate); mandibles greatly developed, strongly exserted, visible from above, pointed at the apex, the space within armed with three or four short teeth; labrum large and broad, separated by a distinct membranous clypeus; first joint of the antennæ long, as long as the third, and stout; antennary orbits very feebly swollen; scutellum very broad, short, strongly transverse, broadly rounded behind; tarsi thickly clothed with silky hair beneath, laterally compressed, the outer apical angle of joints 2–4 of the front and middle pairs and of joints 2 and 3 of the posterior pair produced into a long lobe (the penultimate joint of all most distinctly and more rounded at the apex, and produced beneath the last joint which is inserted at the extreme base of the preceding one); tibial spurs strong; prosternum narrow, horizontal, smooth, the apex produced and rounded, strongly margined within; anterior coxal cavities widely open behind; intermediate coxæ narrowly separated, with distinct trochantin; third and fourth ventral segments without distinct coriaceous hind margin.

The single known species is found by beating the withered hanging leaves of cultivated Musaceæ, never about timber; I met with it plentifully in various parts of Chiriqui.

1. **Ischyomius singularis.** (Tab. XI. figg. 17; 17 *a*, labium; 17 *b*, maxilla and maxillary palpus; 17 *c*, mandible from above.)

Ischyomius singularis, Chevr. Mitth. des Münch. ent. Ver. ii. p. 98[1].

Hab. Panama, Volcan de Chiriqui, Bugaba (*Champion*).—Colombia (*coll. Brit. Mus.*), Honda[1], Bogota[1].

This insect will be readily identified from our figure and Chevrolat's brief description:—"Flavus vel piceus, supra crebre fortiterque punctatus; oculis nigris; prothorace ad basin extus profunde foveato; corpore infra pedibusque flavo-pallidis. Long. $7\frac{1}{2}$–$9\frac{1}{2}$, lat. $2\frac{1}{2}$–3 millim."

Group APOCRYPHIDES.

This group, the Group I. of the Tribe "Hélopides" of Lacordaire, is represented in Central America by a single genus nearly allied to *Apocrypha* (=*Compsomorphus*, Sol.); the latter contains a few small species from North America and Chili, and possibly also one or two undescribed forms from Western Australia. The species of both genera are known by their more or less globose unmargined thorax, convex oval elytra, &c. The species of *Apocrypha* appear to be rarely met with; they are said to be found on the ground; doubtless *Pseudapocrypha* is of similar habits.

PSEUDAPOCRYPHA.

Mentum trapezoidal, slightly rounded at the sides, longitudinally raised in the middle, the front angles subacute; ligula strongly exserted; last joint of the labial palpi rather long, ovate, that of the maxillary pair very broad, strongly securiform; inner lobe of the maxillæ armed with a slender long curved tooth at the apex; mandibles cleft at the apex; antennæ long, very stout from the base, gradually widening outwardly, joint 1 stout, 2 short, distinctly narrower than 1, 3 twice as long as 2, joints 4–6 subequal, 8–10 nearly as broad as long, joint 11 longer and rather broader than 10, strongly and obliquely acuminate at the apex; labrum prominent; head rather long, strongly exserted, the epistoma truncate in front and not distinctly defined, the sides of the front very oblique, the antennary orbits slightly swollen; eyes small, coarsely faceted, above rounded, below obliquely and narrowly produced beneath the base of the antennæ; prothorax subglobose, the angles obsolete, the sides confounded with the flanks and not margined, the base and apex truncate, the base shallowly margined; scutellum moderately large, triangular; elytra ovate, very convex; legs rather long; femora incrassate outwardly; tibiæ with long and rather stout spurs (those of the anterior pair still stouter), the two hinder pairs with a slender and rather long tooth (sometimes broken off) at the outer apical angle; tarsi clothed with rather long bristly hair beneath, the first joint of the anterior pair long and stout (possibly a sexual character), the first joint of the posterior pair long, much longer than the following two joints united; prosternum broad, slightly raised and swollen on each side, the apex vertical; anterior coxæ strongly exserted; middle coxæ without distinct trochantin; posterior coxæ very widely separated; metasternum very short; intercoxal process very broad, rounded in front; epipleuræ narrow, ending a little beyond the last ventral suture; third and fourth ventral segments with distinct coriaceous hind margin; body hairy, apterous.

This genus will be at once known from *Apocrypha*, its nearest and only known ally, by the very strong tibial spurs; the very stout antennæ, with the last joint obliquely acuminate; the femora more strongly incrassate; the prosternum broader, &c. The single known species is much larger in size than *Apocrypha*. *P. lacordairii* is doubtless the undescribed insect from Guatemala mentioned by Lacordaire, Gen. Col. v. p. 433, nota. Lacordaire while noting the affinity of our insect with *Apocrypha*, suggests that it may be allied to *Læna*; there can be no doubt, however, that its true affinities are with *Apocrypha*. I am unable to detect any external sexual character; in the three specimens before me the first joint of the anterior tarsi is similarly formed.

1. **Pseudapocrypha lacordairii.** (Tab. XI. figg. 18; 18 *a*, labium; 18 *b*, maxilla and maxillary palpus.)

Apocrypha (?) sp., Lacord. Gen. Col. v. p. 433, nota[1].

Elongate, very convex, piceous-black, shining, the entire surface somewhat thickly clothed with a very fine short appressed pubescence and long erect hairs. Head exceedingly coarsely and not very closely punctured, the punctures more or less longitudinal in form and here and there confluent, the oral organs (except the tips of the mandibles which are black) and the antennæ sometimes more or less ferruginous; prothorax longer than broad, widest about the middle, strongly longitudinally convex, with widely scattered rather coarse impressions, each impression bearing a long erect hair, a longitudinal space on the disc impunctate; elytra sculptured like the prothorax, the impressions widely scattered and finer on the disc but becoming very coarse and much closer together outwardly, a row of still coarser punctures within the lateral margin; beneath exceedingly finely and closely punctured, with widely scattered coarse impressions; legs dark ferruginous, the femora piceous outwardly.

Length 7–8½ millim.

Hab. Mexico, Chiapas (*Sallé*); Guatemala[1] (*coll. Brit. Mus.*).

Four examples.

Group **MISOLAMPIDES.**

This group, originally defined by the Marquis de Brême, consists of Group II. of the Tribe "Hélopides" of Lacordaire. The New-World genera of "Misolampides" are few in number and are confined to South and Central America; the group is not represented in America north of Mexico. The Central-American species hitherto placed in *Sphærotus* I have thought best to eliminate and place in other genera.

The genus *Mitys*, placed by me in the "Tenebrionides" (*ante* p. 97), must also be included in this group. Not having at that time critically examined the genera of "Misolampides" and not having detected any resemblance between the typical species of *Sphærotus* and the Mexican *S. politus*, de Brême, with which *M. lævis* is no doubt identical, I was induced to include *Mitys* with the "Tenebrionides." There can be no doubt, however, that this genus belongs to the present group, and though superficially resembling *Œatus*, and other genera of "Tenebrionides," its place is with *Sphærotus* and its allies. *Mitys* will be known from *Sphærotus*, as understood here, by the larger head with more greatly developed epistoma, the strong claw to the maxillæ, the broader scutellum, the elytra never with rows of coarse rounded impressions, smooth, or at most with rows of very minute punctures on the disc, the broader and more produced prosternum, &c.; and from *Oxidates* (with which it agrees in the structure of the maxillæ, &c.) by its still more developed epistoma, relatively longer thorax, differently sculptured elytra, &c. In general facies *Mitys* is not unlike *Elæodes*; it does not bear any resemblance to *Sphærotus* and allies; the Helopiform structure of the antennæ, however, indicates its proper affinity. *M.* (*Sphærotus*) *politus*, de Brême, is no doubt the insect referred to by Lacordaire (Gen. Col. v. p. 447, nota) as possibly belonging to the Temperate South-American genus *Heliophygus*, with which, however, it cannot be included.

Hegemona, included by Lacordaire in his Group III. "Hélopides vrais," seems to me to be better placed here; Allard, in his recent monograph of this genus, places it in the "Misolampides."

The different species are usually found by beating dead branches, especially of fallen decaying trees, in or near the forest; some are found in and about new clearings, others in very dark humid places.

SAZICHES.

Mentum trapezoidal, strongly deflexed at the sides, the angles not prominent; ligula strongly exserted, rounded in front; last joint of the maxillary palpi broad, securiform; inner lobe of the maxillæ armed with coarse setæ only; mandibles truncate at the apex; antennæ long, slender, reaching far beyond the base of the prothorax, joint 3 much longer than 4, joints 4–6 subequal, 7–10 long, decreasing slightly in length, distinctly widening outwardly, joint 11 longer than 10, oblong ovate, the five outer joints (as usual) closely punctured and pubescent; head comparatively broad and large, the epistoma greatly developed and separated by a deeply impressed fine semicircular groove; eyes transverse, rather convex; prothorax transverse, somewhat convex, narrowly but distinctly margined on all sides; scutellum large, triangular; elytra very strongly transversely gibbous, raised greatly above the level of the prothorax, the apices

subcaudate, the humeri distinct, striate on the disc, with nine rows of very coarse rounded impressions; epipleuræ rather broadly extending to the apex; prosternum horizontal, rather broad, its anterior face declivous, the apex acuminately produced; mesosternum moderately deeply excavate; metasternum short, longitudinally raised and convex in the centre between the middle coxæ; intercoxal process long, subparallel, comparatively not very broad (narrower than in the allied genera), narrowly margined, rounded in front; tarsi long and stout, thickly clothed with hair beneath, laterally compressed, similar in both sexes, the penultimate joints of the two front pairs strongly produced at their outer apices (these joints thus appearing bilobed), the first joint of the posterior pair long, the length of the two following joints united, and at least three fourths of the length of the apical one; tibiæ very little curved, the posterior pair almost straight in both sexes, the inner apices slightly thickened in the male; body apterous.

This genus includes a single species from Guatemala. *Saziches* in its gibbous elytra with rows of very coarse rounded impressions approaches *Sphærotus*, *Oxidates*, and *Isaminas*; it will be readily known from these genera by the long first joint of the posterior tarsi, the bilobed penultimate joints of the anterior and middle tarsi, the slender antennæ, the large scutellum, the longer and narrower intercoxal process, &c.; and also from the two first named by the straighter tibiæ.

The sexual organs in *Saziches* differ considerably from those of the preceding genera I have yet examined, though formed in both sexes almost exactly as in *Hegemona*:—in the male the sheath of the œdeagus at about the middle is abruptly curved upwards, the apical portion somewhat produced and subhorizontal, and the apex itself truncate, the intromittent organ being protruded from beneath but far from the apex; the sheath is protruded from the centre of what appears to be a completely hidden sixth segment, the latter when extended is found to consist of two long and broad valvular pieces which are corneous on their external sides, and above and below within densely clothed with matted fulvous spongy hair; in the female the ovipositor is formed of two broad vertical plates placed close together and acuminate at the apex and very similar to that obtaining in the same sex of *Acropteron*. In the male of *Isaminas* the sheath is simply and gradually curved and narrowing to the apex, and of the ordinary character; the female of the same genus, and also of *Oxidates* (at least of *O. planicollis*), has the usual horizontal flattened process with a short style on each side near the apex. We give a figure (Tab. XI. fig. 22 *c*) of the œdeagus of the male of *S. subcaudatus*, viewed from beneath.

1. **Saziches subcaudatus.** (Tab. XI. figg. 22, ♂; 22 *a*, labium; 22 *b*, maxilla and maxillary palpus; 22 *c*, œdeagus.)

Black, slightly shining. Head very minutely, sparingly, and almost imperceptibly punctured, the intraocular space broadly and shallowly impressed in the middle; prothorax transverse, widest in the middle, the sides slightly rounded, scarcely narrower at the apex than at the base, the hind angles subrectangular, the anterior angles rounded but not broadly so, the disc sometimes with a rounded fovea on each side before the middle, shallowly transversely impressed before the base, and with indications of a fine shallow obsolete central groove, smooth, almost impunctate; scutellum shining, usually transversely impressed behind; elytra a little wider than the prothorax at the base, rapidly widening to the middle, rounded at the sides, strongly gibbous and raised greatly above the level of the prothorax (more so than in the allied genera), the apices produced, slightly divergent, and swollen, with rows of moderately deep coarse rounded

impressions, the impressions on the disc placed upon narrow impressed lines (these lines or striæ are well defined and deeply impressed outwardly, though shallow towards the suture, and extend only for about one third of the length of the elytra and are quite obsolete from the basal and apical portions); beneath shining, very shallowly, finely, and sparingly punctured.

Length 11½-15 millim. (♂ ♀.)

Hab. GUATEMALA (*coll. Brit. and Stuttgart Museums*), Senahu and San Juan in Vera Paz 2000 to 3000 feet (*Champion*).

Several examples.

OXIDATES.

Sphærotus (3rd division), de Brême, Revue Zool. 1842, p. 109; Lacordaire, Gen. Col. v. p. 447, nota (nec Kirby).

Very near *Sphærotus* and differing as follows:—Mentum strongly deflexed at the sides, about as broad as long; inner lobe of the maxillæ armed with a long curved claw at the apex * (in *Sphærotus* with coarse setæ only); epistoma larger and separated from the front by a fine impressed line (in *Sphærotus* by a deep groove); antennæ slender, the penultimate joints narrower at the base; prothorax never longer than broad, much less convex, usually moderately transversely so (never globose or longitudinally convex), more evidently margined, in most of the species very strongly so at the base; scutellum small; elytra with rows of more or less coarse rounded impressions; prosternum much broader (except in *O. puncticeps*), more or less strongly and horizontally produced, often deeply longitudinally grooved on each side (declivous behind and less strongly produced in *Sphærotus*); mesosternum usually very feebly excavate in front, rarely V-shaped (*O. planicollis*); epipleuræ extending to the last ventral suture, thence in some species very narrowly continued to the apex; tarsi not so stout, the first joint of the posterior pair short as in *Sphærotus*; tibiæ slightly curved and sinuous in both sexes, more distinctly so in the male; the rest as in *Sphærotus*.

This genus contains various Mexican species which I have thought advisable to separate from *Sphærotus*; it includes the three species placed by the Marquis de Brême in his third division of that genus, and some others described here. Lacordaire (*op. cit.*) reproduces de Brême's divisions and remarks that some of the species placed by that author in *Sphærotus* probably belong to other genera. *Oxidates* will be known from *Sphærotus* by the above-mentioned characters, but more especially by the strong claw to the maxillæ and the differently formed prosternum. *Sphærotus* as understood here will contain only the first division of the genus as defined by de Brême, and of which the South-American *S. curvipes*, Kirby, and *S. cribratus*, de Brême, may be taken as the types. The second division of *Sphærotus*, originally containing only one species, *S. politus*, de Brême, from Mexico, is, as already noted, here separated and included under the genus *Mitys*.

* De Brême (*op. cit.* p. 107), in amending Kirby's definition of *Sphærotus* (Trans. Linn. Soc. xii. p. 416), states that the inner lobe is armed with a very small claw. I fail to see this in the typical species (*S. curvipes* and *S. cribratus*); this character is not mentioned by Lacordaire.

* *Prosternum horizontal, broadly and strongly produced, the apex raised and received by the moderately concave* V*-shaped mesosternum.*

1. **Oxidates planicollis.** (Tab. XI. figg. 19, ♂ ; 19 *a*, labium ; 19 *b*, maxilla and maxillary palpus ; 19 *c*, œdeagus.

Black, with a slight bronzy tint, moderately shining. Head very sparingly, finely, and shallowly punctured ; antennæ long and slender ; prothorax transverse, comparatively very broad, rounded at the sides, if anything rather more narrowed anteriorly than at the base, the sides in some examples constricted immediately before the base and with the hind angles acute, and in others less rounded and narrowing more obliquely before and behind the middle, the anterior angles broadly and obtusely rounded, the base distinctly but comparatively not very strongly margined, the disc somewhat flattened and often with a shallow rounded fovea on each side a little before the middle, the surface exceedingly finely, shallowly, and rather closely punctured ; scutellum comparatively large and distinct ; elytra abruptly constricted behind and with the apex rather broadly produced, with rows of coarse scattered rounded impressions, the impressions finer and shallower along the basal half of the suture ; beneath shining, almost smooth ; prosternum horizontal, smooth, broadly and longitudinally excavate within, broadly and strongly produced, the apex rounded, raised, and received by the moderately deeply excavate V-shaped mesosternum ; epipleuræ ending at the last ventral suture ; intercoxal process very broad, narrowly margined anteriorly ; legs black.

Length 11–14½ millim. (♂ ♀.)

Hab. Mexico, Misantla (*Höge*).

Found in abundance by Herr Höge at Misantla. This species will be at once known from its allies by the flatter and broader thorax, the base of which is not so strongly margined, and the differently formed pro- and mesosternum.

** *Prosternum very broad, subhorizontal, the apex not raised ; mesosternum broadly and very feebly excavate.*

2. **Oxidates gravidus.**

Sphærotus gravidus, de Brême, Revue Zool. 1842, p. 109[1].

Hab. Mexico [1] (*coll. Brit. Mus.*), Cordova (*Sallé*).

In this species the numerous large and coarse though comparatively shallow impressions on the elytra each bear a smaller impression in the centre.

3. **Oxidates thoracicus.**

Sphærotus thoracicus, de Brême, Revue Zool. 1842, p. 110[1].

Hab. Mexico [1] (*coll. Brit. Mus.*), Tuxtla, Playa Vicente, Cordova (*Sallé*), Misantla (*Höge*).

Several specimens before me agree very fairly with the description, except that they have the thorax very minutely and shallowly punctured instead of "lisse" ; I notice, however, the punctuation of the head and thorax varies in intensity, and consequently have little doubt our insects are referable to de Brême's species. The thorax is

said to be "à peine convexe": in our examples the thorax is moderately transversely convex; still compared with the typical species of *Sphærotus* its shape might be thus described.

4. Oxidates mexicanus.

Sphærotus mexicanus, de Brême, Revue Zool. 1842, p. 110[1].

Hab. MEXICO [1], Cordova (*Sallé*).

In *O. mexicanus* the punctures of the elytra are much smaller and more widely separated than in the other species of the genus.

5. Oxidates princeps. (Tab. XI. fig. 20, ♂.)

Black, above tinged (the elytra especially) with greenish-bronze, slightly shining. Head finely, shallowly, and somewhat closely punctured; antennæ long, slender; prothorax about as long as broad, the sides slightly rounded, about equally narrowed at the base and apex, feebly transversely convex, the anterior angles broadly rounded, the base very strongly margined, the surface dull black, exceedingly finely and shallowly and somewhat closely punctured, a row of coarser impressions in front of the basilar groove; scutellum rather large and distinct; elytra the width of the prothorax at the base, abruptly constricted behind and with the apex somewhat broadly produced, with rows of coarse rounded impressions, the impressions scarcely finer towards the suture and slightly tinged with metallic golden within, more shining than the prothorax, of a dark greenish-bronze tint; beneath shining, almost smooth; prosternum very broad, subhorizontal, broadly produced, the apex rounded but not raised, smooth, and with a deep U-shaped mark between the coxæ; mesosternum simple; epipleuræ extending to the last ventral suture, almost obsolete beyond; intercoxal process very broad, the anterior margin broadly raised; legs black; the posterior tibiæ clothed with short fulvous hair within in their apical third in the male.

Length 14 millim. (♂.)

Hab. MEXICO, Oaxaca (*Höge*).

One example. This species closely resembles *O. thoracicus*, but is considerably larger, the thorax longer and not so strongly rounded at the sides, the elytra longer, &c.

6. Oxidates aurichalceus.

Golden-bronze, slightly shining. Head comparatively closely and very evidently, though finely, punctured; prothorax moderately transversely convex, nearly as long as broad, the sides rounded, constricted before the base, and about equally narrowed at the base and apex, the anterior angles broadly rounded, the hind angles subrectangular, the base very strongly margined, the surface very finely and closely punctured; elytra broader than the prothorax at the base, moderately rounded at the sides, comparatively somewhat depressed on the basal half of the disc, with rows of coarse irregular more or less longitudinal impressions and in the centre of each of which is a smaller impression, the interspaces finely and very shallowly punctured; beneath dark bronze, shining; prosternum strongly produced, subhorizontal, the apex not raised; legs black, finely, closely, and shallowly punctured.

Length 15 millim.

Hab. MEXICO (*Galeotti, in Brit. Mus.*).

This distinct species is not very closely allied to any of the others here noticed; it will be known by the characters given above. The single example in the National collection is in a very mutilated condition, without antennæ or abdomen.

*** *Prosternum narrower and acuminately produced, the apex slightly raised.*

7. Oxidates puncticeps.

Bronze-black, rather dull. Head closely and comparatively coarsely punctured; antennæ long and slender; prothorax broader than long, feebly transversely convex, the sides rounded, constricted just before the base, rather narrower in front than at the base, the hind angles subacute, the anterior angles broadly rounded, the base strongly margined, the surface finely, closely, and very evidently punctured; scutellum small; elytra obliquely and abruptly narrowing behind, the apex not much produced, with rows of very coarse rounded impressions, the impressions slightly tinged with metallic golden within and not finer along the suture; beneath shining, very sparingly and finely punctured; prosternum comparatively narrow, subhorizontal, subrugulose, grooved on each side within, strongly and acuminately produced, the apex slightly raised; mesosternum almost simple; epipleuræ reaching to the last ventral suture, almost obsolete beyond; legs black.

Length 8½ millim. (♂ ♀.)

Hab. Mexico, Jalapa, Misantla (*Höge*).

Two examples. This species differs from its allies in having the head comparatively coarsely punctured, the elytra less abruptly narrowed behind and with the apex less distinctly produced, the prosternum narrower and acuminately produced.

ISAMINAS.

Isaminas, F. Bates in litt.

Mentum and palpi as in *Oxidates*; inner lobe of the maxillæ with a strong curved claw at the apex (as in *Oxidates*); mandibles truncate at the apex; antennæ comparatively short, longer in the male, the third joint long, much longer than the fourth (in *Oxidates* but little longer), joints 9 and 10 about as broad as long in the male, more or less transverse in the female; epistoma large (less transverse than in *Oxidates*), sharply defined (at the sides by a deeper groove); prothorax very strongly transverse, nearly twice as broad as long, comparatively rather flat, very distinctly margined; scutellum small; elytra short, transversely gibbous, raised considerably above the level of the prothorax, the apex produced, with rows of coarse rounded impressions (as in *Oxidates* and *Sphærotus*); prosternum very broad, horizontal, longitudinally grooved on each side within, the central part convex, very broadly produced, parallel or acuminate, the apex received by the more or less deeply excavate mesosternum; metasternum very short, deeply transversely impressed; intercoxal process broad, impressed on each side within; epipleuræ distinctly and rather broadly extending to the apex in *I. gibbipennis*, more or less confounded with the elytra and defined towards the base only in *I. brevicollis*; first joint of the posterior tarsi short; tibiæ almost straight in both sexes; body apterous; the rest as in *Oxidates* and *Sphærotus*.

This genus includes two closely allied Central-American species. *Isaminas* though unquestionably very closely allied to *Oxidates* will be readily known from that genus by the exceedingly broad and short thorax, the much shorter and differently formed antennæ (the third joint distinctly longer compared with the fourth), the still broader prosternum, the straighter tibiæ, &c. These insects are found by beating the withered still-attached leaves of the decaying branches of trees in dark places in the dense humid forest.

1. **Isaminas gibbipennis.** (Tab. XI. fig. 21, ♀.)

Isaminas gibbipennis, F. Bates in litt.

Black, with a very faint bronzy tinge, slightly shining. Head sparingly and finely punctured, often with two shallow impressions between the eyes; prothorax with the sides broadly rounded anteriorly, almost straight (sometimes slightly sinuous and irregular) from the middle to the base, the hind angles subrectangular, the base rather strongly margined, the disc with a distinct central groove and usually with a rounded fovea on each side about the middle, the surface almost impunctate; elytra with rows of coarse rounded impressions; beneath smooth, shining; prosternum very broad, parallel, strongly produced, deeply longitudinally grooved on each side within, the central convex part slightly extended and received by the concave mesosternum; epipleuræ distinctly separated from the elytra and rather broadly extended to the apex; legs black.

Length 9–11½ millim.; breadth 6–7 millim. (♂ ♀.)

Hab. Nicaragua (*Sallé, coll. F. Bates*), Chontales (*Belt, Janson*); Costa Rica (*Sallé*).

Numerous examples.

2. **Isaminas brevicollis.**

Closely allied to *I. gibbipennis* and only differing as follows:—the antennæ in the female not quite so short and with the ninth and tenth joints less transverse; the prosternum less parallel, broadly and acuminately produced and received by the deeply excavate V-shaped mesosternum; epipleuræ confounded with the flanks of the elytra and only defined therefrom at the base.

Length 8½–11 millim. (♂ ♀.)

Hab. Guatemala, Senahu, San Juan in Vera Paz, Sinanja (*Champion*).

Many examples. This insect, though extremely similar to *I. gibbipennis*, differs constantly in the structure of the prosternum and elytral epipleuræ; I am obliged to treat it as a distinct species. In Guatemala it appears to be confined to the Atlantic slope, to the vicinity of the Polochic valley and the humid forest-clad mountain-range north thereof; it is found at an elevation of from 1500 to 3000 feet.

HEGEMONA.

Hegemona, Castelnau, Hist. Nat. Ins. Col. ii. p. 230 (1850); Lacordaire, Gen. Col. v. p. 448; Allard, Monogr. in Mittheil. der schweiz. ent. Ges. v. pp. 60 & 251 (1880).

This is probably the most characteristic genus of Central-American Tenebrionidæ. Seven species have been described, six from Central America and one from Colombia; we have now to record seventeen, no less than eleven of which appear to be new. Two only were described previous to the publication of M. Allard's monograph of the genus; Lacordaire (*op. cit.* p. 449, nota), however, in addition to the two former briefly notices two other species from Mexico. Besides the large number of specimens before me, I have examined many others in the British and Stuttgart Museums, and also in the collection of M. Réné Oberthür. The species are all of large size, and are the giants of the section Helopidæ. The males usually have the anterior tarsi more dilated than the females, the thorax rather longer, &c.; the females in some few species

have the fifth elytral interstice (very rarely the first also) produced into an angular or rounded prominence at the apex, this character in one species (*H. zunilensis*) being also present in the male. The sexual organs of both sexes are strongly developed, and very easily seen in this genus; they are formed very much as in *Saziches* (*antè*, p. 262): in the male (*cf.* Tab. XI. fig. 22 *c*) the œdeagus is still longer and broader, horizontal or recurved upwards towards the apex, and the apex itself rather broadly truncate or shovel-shaped; in the female the flattened vertical plates, forming what is doubtless an ovipositor, are still longer and broader. This structure scarcely varies in the fifteen species before me, at least one sex of each of which I have examined. The different species are of the same habits as the preceding genera of this group, but are usually found in more open places in the forest.

The Central-American species may be identified by the following table, which is chiefly based upon the sculpture, shape, &c. of the elytra:—

Interstices more or less convex.
- Striæ broad, coarsely crenate-punctate; the interstices broad, moderately convex, finely punctured, usually alternately green and cupreous, but little shining . . . . . *resplendens.*
- Striæ narrower and more finely punctured.
  - Elytra comparatively long, often more or less gibbous.
    - Almost unicolorous, rather dull bronzy-cupreous; the fifth interstice (? *elongatus*) not produced at the apex in the female . . *elongatus, hondurensis.*
    - Almost unicolorous, duller darker bronze; the fifth interstice produced into a strong tooth at the apex in the female . . . *bicaudatus, retrodentatus.*
    - The interstices alternately metallic green and cupreous; the fifth not produced.
      - Very shining, long, strongly laterally compressed, the interstices feebly convex . . . . . *compressus.*
      - Duller, shorter, less compressed laterally, the interstices more convex; the prothorax much smoother and darker in tint . . . . . *lineatus.*
    - Almost black, broad, somewhat depressed on the disc . . . . *niger.*
    - Greenish-bronze, moderately long, strongly laterally compressed; the fifth interstice produced into a short rounded prominence at the apex in both sexes . . . . . *zunilensis.*
    - Brownish-bronze, narrow and subparallel, strongly laterally compressed; the fifth interstice not produced . . . . . *angustatus.*
  - Elytra broader and shorter, globose-ovate.
    - Bright bronze, the prothorax greenish; the sutural and seventh interstices slightly raised posteriorly and confluent at the apex and together a little produced at the sutural angle . . *chiriquensis.*

Dark blue, the prothorax brilliant bluish-violet; the first and fifth interstices produced and separately dentiform at the apex . . . . . *furcillatus.*

Striæ with coarse longitudinal impressions, which are here and there confluent.

Elytra moderately long, gibbous.

Very dark bluish-bronze, rather dull, narrow, strongly laterally compressed; the interstices somewhat strongly convex, the fifth not produced . . . . . *mexicanus.*

Very dark bluish-bronze, more ovate, less compressed laterally; the interstices flatter, the second to the ninth confluent just before the apex and together produced into a short rounded lateral prominence in the female . . . . . *guatemalensis.*

Interstices flat on the disc; the elytra globose-ovate, very bright bronze . . . . *costaricensis.*

Interstices strongly angularly raised; the elytra broad, globose-ovate, very bright bronze.

Striæ coarsely and irregularly crenate-punctate; the interstices transversely or obliquely wrinkled, much interrupted, and very irregular posteriorly . *interruptus.*

Striæ finely punctured; the interstices more regular, and less interrupted posteriorly . . . . . *filibuster.*

1. Hegemona resplendens.

Hegemona resplendens, Cast. Hist. Nat. Ins. Col. ii. p. 230[1]; Allard, Mittheil. der schweiz. ent. Ges. v. pp. 60, 251[2].

Eucamptus iridis, Höpf. Dej. Cat. 3rd edit. p. 230[3].

Eusarca iridipennis, Chevr. loc. cit.[4]

Hab. Mexico[1 3 4] (*coll. F. Bates, Brit. Mus.*), Yucatan (*coll. Oberthür*), Cordova[2] (*Sallé*), Jalapa (*Höge*).

This fine insect is apparently not uncommon in Mexico.

2. Hegemona elongatus.

Hegemona elongatus, Allard, Mittheil. der schweiz. ent. Ges. v. pp. 61, 253[1].

Hab. Mexico[1] (*coll. Oberthür, ex coll. Mniszech*), Yucatan (*coll. Oberthür*).

M. Réné Oberthür has kindly lent me the type and a second specimen (both males) of this species. We have not yet found this insect in any of the large collections sent to us from Mexico.

3. Hegemona hondurensis.

Bronze-black, rather dull, the elytra more shining. Head very finely and shallowly punctured, the epistoma separated by a deep groove; prothorax subquadrate, about as long as broad in the male, shorter in the female, narrowing gradually from the base, the sides very little rounded, almost straight, the hind angles subrectangular, the anterior angles strongly produced in front and narrowly rounded, the surface very finely, shallowly, and somewhat closely punctured; elytra long, ovate, slightly compressed laterally, rather

wider than the prothorax at the base, strongly gibbous, the striæ rather broad, shallowly but very distinctly punctured on the disc, more coarsely so towards the sides, of a rather dull bronzy-cupreous tint, the interstices moderately convex, smooth, the alternate ones sometimes faintly tinged with green, the apices very slightly produced; beneath more shining, very shallowly and finely punctured; prosternum subhorizontal, strongly produced, the apex raised and tuberculiform, broadly longitudinally raised on each side between the coxæ, its anterior face deeply excavate within.

Length 18½–19 millim.; breadth 8–9 millim. (♂ ♀.)

Hab. British Honduras, R. Hondo (*Blancaneaux*).

Three examples. This species is nearest allied to *H. lineatus*, from which it will be known by the duller and almost unicolorous elytra, the less convex interstices, the more coarsely punctured striæ, the differently formed prosternum, the less excavate frontal region of the head, &c.

4. **Hegemona bicaudatus.** (Tab. XI. fig. 24, ♀.)

Bronze-black, rather dull. Head very shallowly, minutely, and almost imperceptibly punctured, the epistoma separated by a fine narrow groove; prothorax transverse, very little shorter in the female, about equally narrowed at the base and apex, the sides somewhat rounded, broadly but very shallowly emarginate on each side a little behind the middle, the hind angles obtuse, the anterior angles broadly rounded and prominent, the surface very shallowly and finely but somewhat closely punctured; elytra long, ovate, moderately gibbous, the width of the prothorax at the base, rather longer in the male, a little wider at the base in the female, the striæ comparatively coarsely punctured, the interstices convex and almost impunctate, the apices rather obtuse, rather more bronzy and a little brighter in tint than the head and prothorax; the second, fifth, and eighth interstices confluent at the apex and together produced into a broad, stout, conical tubercle (rounded at the apex, distant from the suture, and projecting laterally far beyond the apex of the elytra) on each elytron in the female, simple in the male; beneath more shining, almost smooth; apical portion of the prosternum produced into a stout, conical tubercle, the apex of which is rounded.

Length 21–22 millim.; breadth 9–9½ millim. (♂ ♀.)

Hab. Guatemala (*Sallé*, ♀), Coban (*Champion*, ♂).

H. bicaudatus must be closely allied to *H. retrodentatus*, judging from the description of that species, but as the Guatemalan insect differs in several points I prefer to describe it.

H. retrodentatus is said to have the "punctis striarum parvis," a definition that cannot, I think, be applied to *H. bicaudatus*.

Compared with *H. resplendens*, the present insect is longer and narrower.

5. **Hegemona retrodentatus.**

Hegemona retrodentatus, Allard, Mittheil. der schweiz. ent. Ges. v. pp. 61, 253[1].

Hab. Mexico, Chiapas (*Chevrolat*[1]).

This species is unknown to me; it is described as being allied to *H. resplendens*, and to differ as follows:—The head and thorax impunctate; the thorax a little narrower, more quadrate, the base slightly emarginate, the anterior angles more rounded and more thickly margined; the elytra with similar deep grooves, but with the striæ more finely

punctured and not crenulated, the fifth interstice forming a strong pointed tooth a little before reaching the apex. In colour the head and thorax blackish-bronze, almost dull, the elytra of a browner bronze, more shining, and with a very slight cupreous tint. The specimen described is, no doubt, a female.

6. **Hegemona compressus.** (Tab. XII. fig. 1, ♂.)

Hegemona compressus, Allard, Mittheil. der schweiz. ent. Ges. v. pp. 61, 254[1].

Hab. Mexico[1] (*coll. Oberthür, ex coll. Mniszech*); Guatemala (*coll. Stuttgart Mus.*), Lanquin (*Champion*).

The type of this species, kindly lent me by M. Réné Oberthür, agrees well with a male example captured by myself at Lanquin, and a second in the Stuttgart Museum. In this species the prosternum is subhorizontal, strongly acuminately produced, and longitudinally excavate on each side between the coxæ. The example from Lanquin is figured.

7. **Hegemona lineatus.** (Tab. XI. fig. 23, ♂.)

Bronze-black, the head and prothorax rather dull, the elytra shining. Head very minutely, shallowly, and sparingly punctured, broadly flattened and excavate anteriorly, the epistoma separated by a fine groove (deeply impressed posteriorly, shallowly so at the sides); prothorax subquadrate, nearly as long as broad in the male, shorter in the female, very gradually narrowing from the base, the sides almost straight, the hind angles subrectangular, the anterior angles produced in front, rounded, and comparatively very prominent, the disc sometimes with a very shallow fine impressed line, the surface finely, shallowly, and somewhat closely punctured; elytra long, rather narrow, compressed and but little rounded at the sides, strongly gibbous, a little wider than the prothorax at the base, the striæ very finely and shallowly punctured on the disc, much more coarsely so at the sides, the interstices strongly convex (still more strongly so posteriorly), almost smooth, alternately coloured metallic green and purplish-cupreous, and the first, second, and fifth usually confluent at the apex in both sexes, the apices somewhat obtuse; beneath bronze-black, shining, almost smooth; prosternum horizontal, strongly acuminately produced, smooth, its anterior face concave within and declivous, the apex rounded off and not tuberculiform.

Length 17–20 millim.; breadth 7–9 millim. (♂ ♀.)

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala (*Sallé, coll. Brit. and Stuttgart Museums*), San Juan and Panima in Vera Paz (*Champion*).

Numerous examples. This vividly-coloured insect is nearest allied to *H. compressus*, from which it may be known by its duller head and thorax, the latter much more shallowly and finely punctured, the elytra rather duller and shorter and less compressed at the sides, the interstices much more convex, the prosternum smoother, &c. The known localities for this species are all on the Atlantic slope.

8. **Hegemona niger.** (Tab. XII. fig. 2, ♂.)

Black, slightly shining. Head very finely and sparingly punctured, the epistoma comparatively short and separated by a moderately deep groove, the vertex with a shallow semicircular impressed line extending on each side anteriorly to the inner margin of the eye; prothorax transverse, the sides moderately rounded and scarcely more narrowed anteriorly than at the base, the hind angles subrectangular, the

anterior angles broadly rounded, the surface very shallowly, minutely, and sparingly punctured; elytra very little wider than the prothorax at the base, broad and ovate, rather long, somewhat depressed on the disc, the striæ finely and very shallowly punctate, more distinctly so outwardly, the interstices punctured like the prothorax, feebly convex towards the suture, strongly convex outwardly and at the apex, the first, second, and fifth there confluent, the apices rather obtuse; beneath black, shining, almost smooth; prosternum gradually rounded to the apex, the apex not tuberculiform.

Length 20 millim.; breadth 9–9½ millim. (♂.)

Hab. GUATEMALA, Santa Barbara and El Jicaro in Vera Paz (*Champion*).

This insect is allied to *H. elongatus*, but will be known by its smaller size, black colour, the shorter epistoma separated by a shallower groove, the shorter, flatter, and less convex elytra, the striæ of which are not quite so finely punctate, the rounded-off prosternum, &c. I only met with *H. niger* on the Chuacus range of mountains; the two examples, both males, were captured in not very widely separated localities, though on different sides of the range, one at an elevation of 5000 feet, the other at 2500 feet.

9. **Hegemona zunilensis.** (Tab. XI. fig. 26, ♀.)

Bright bronze, with a slight greenish tint, shining. Head very shallowly and minutely punctured, the epistoma separated by a narrow impressed line; prothorax subquadrate, about as long as broad in the male, shorter in the female, narrowing gradually from the base, the sides very slightly rounded, almost straight, the hind angles rather obtuse, the anterior angles produced in front, rounded, and comparatively prominent, the surface finely, closely, and distinctly punctured; elytra slightly wider than the prothorax at the base, moderately long, strongly gibbous, laterally compressed, but little rounded at the sides, the striæ almost impunctate towards the suture, comparatively finely punctured at the sides, the interstices moderately convex on the basal half, feebly subangular posteriorly, almost smooth, the fifth raised into a short rounded prominence just before the apex in both sexes; beneath more shining, almost smooth; prosternum horizontal, strongly and acuminately produced, longitudinally raised on each side between the coxæ, its anterior face declivous and deeply excavate within.

Length 17–18½ millim.; breadth 7–8 millim. (♂ ♀.)

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion*).

This species was captured in plenty in new clearings in the dense forest above the coffee-plantations of Las Nubes. I only met with the insect on the Pacific slope, and in this one locality. *H. zunilensis* is remarkable on account of the fifth interstice of each elytron being produced into a rounded prominence just before the apex in both sexes.

10. **Hegemona angustatus.** (Tab. XII. fig. 3, ♂.)

Very dark greenish-bronze, shining. Head finely and sparingly, but quite distinctly, punctured, semicircularly excavate anteriorly, the epistoma separated by a deeply impressed groove; prothorax subquadrate, about as long as broad, narrowing very gradually from the base, the sides almost straight, the hind angles subrectangular, the anterior angles produced in front, rounded, and comparatively very prominent, the surface very finely, shallowly, and somewhat closely punctured; elytra brownish-bronze, but little wider than the prothorax at the base, long, subparallel, laterally compressed, very little wider in the middle than at the base, moderately gibbous, rather broadly rounded at the apex, the striæ finely and shallowly punctured on the disc, more coarsely so at the sides, the interstices narrow, moderately convex on the basal half,

strongly and equally so posteriorly, almost smooth; beneath more shining, almost smooth; prosternum horizontal, strongly and acuminately produced, longitudinally raised on each side between the coxæ, its anterior face declivous and deeply excavate within.

Length 16–17 millim.; breadth 6½–7 millim. (♂.)

Hab. GUATEMALA, El Tumbador, Las Mercedes (*Champion*).

Five male examples, all from the coffee-region of the Pacific slope, and from an elevation of from 2500 to 3500 feet.

This is a small species, with narrow, subparallel, laterally compressed elytra; it is not very nearly allied to any of the others noticed here; the female remains to be discovered.

11. **Hegemona chiriquensis.** (Tab. XII. fig. 4, ♀.)

Greenish-bronze, moderately shining. Head finely, shallowly, and sparingly punctured, the epistoma separated by a deeply impressed groove, the intraocular space sometimes shallowly impressed in the middle, the vertex usually with a shallow semicircular impressed line extending on each side anteriorly to the inner margin of the eye; prothorax subquadrate, nearly as long as broad in the male, more transverse in the female, the sides almost straight from the middle to the base, slightly narrowed anteriorly from just before the apex, the anterior angles somewhat produced in front and rounded, the surface very minutely, shallowly, and sparingly punctured; elytra more bronzy than the prothorax, broad, short, strongly gibbous, distinctly wider than the prothorax at the base, rounded at the sides, regularly convex, the humeri rather prominent, the striæ opaque, rather finely punctate, and deeply impressed, the interstices uninterruptedly convex throughout and almost impunctate, the sutural and the seventh slightly raised posteriorly and confluent, and somewhat produced at the sutural angle in both sexes; beneath more shining, usually of a greener tint than above, very finely and sparingly punctured; apex of the prosternum subtuberculiform.

Length 16–19 millim.; breadth 7½–10 millim. (♂ ♀.)

Hab. PANAMA, Chiriqui (*coll. Oberthür*), Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Var. Rather duller; the elytra still more bronzy, the interstices more convex, the spaces between, including the striæ, rather broadly opaque throughout.

Hab. PANAMA, Bugaba 1000 feet (*Champion*).

This insect has the general facies of *H. filibuster*, from which it will be readily known by its much smaller size, rather duller colour, the straighter-sided longer thorax, and the interstices of the elytra regularly convex (not angularly raised) and uninterrupted throughout; it is allied also to *H. allardi* (Haag), Allard, from Colombia, but, judging from the description, abundantly distinct. The specimens from Bugaba represent a rather well-marked variety. I met with both forms rather plentifully.

12. **Hegemona furcillatus.**

Hegemona furcillatus, Allard, Mittheil. der schweiz. ent. Ges. v. pp. 61, 272 (♀)[1].

Hab. MEXICO[1].

Unknown to me. This insect is described as having the head and thorax of a very brilliant bluish-violet colour; the elytra dark blue; the interstices (in the female) very

convex, the first prolonged at the apex into a pointed tooth, the fifth and seventh united near the apex and together forming a second tooth, longer than the other and curved within. It is stated to be nearest allied to, and possibly the female of, *H. allardi*, and also to be of the general form of *H. filibuster*.

13. **Hegemona mexicanus.**

Bronze-black, with a slight bluish tint, rather dull, the elytra shining. Head very minutely and indistinctly punctured, narrowly transversely excavate anteriorly, the groove separating the epistoma deeply impressed behind, shallowly so at the sides; prothorax fully as long as broad in the male, a little shorter in the female, narrowing very gradually from the base, the sides almost straight, the hind angles rather obtuse, the anterior angles strongly produced in front and narrowly rounded, the surface finely, shallowly, and not very closely punctured; elytra more shining than the prothorax, of a very dark bluish-bronze colour, moderately long, more or less grooved within at the base, rather wider than the prothorax, but little rounded at the sides, subparallel, strongly gibbous, laterally compressed, with rows of more or less longitudinal, exceedingly coarse impressions placed upon narrow striæ (the punctures coarser towards the suture and frequently confluent), the interstices rather narrow, smooth, somewhat strongly convex, and here and there confluent on the disc, flatter, broader, and more regular at the sides, the fifth sometimes slightly raised posteriorly; beneath more shining, smooth; prosternum horizontal, strongly acuminately produced, slightly excavate within between the coxæ, its anterior face also excavate.

Length $16\frac{1}{2}$–20 millim.; breadth $6\frac{2}{3}$–9 millim. (♂ ♀.)

Hab. Mexico (*coll. Brit. Mus.*, ♂ ♀), Chinantla (*Sallé*).

Three examples. The description is taken from the male example in the National Collection, the female specimen in the same collection and the individual from Chinantla (possibly a small female) being in a more or less mutilated condition; in the latter the elytra are strongly and almost uninterruptedly grooved within at the base.

14. **Hegemona guatemalensis.** (Tab. XI. fig. 25, ♀.)

Dark bronze, with a slight bluish tint, slightly shining. Head shining, very finely and shallowly punctured, narrowly transversely excavate anteriorly, the groove separating the epistoma deeply impressed behind, shallowly so at the sides; prothorax broader than long, very gradually narrowing from the base, the sides, slightly rounded, the hind angles rather obtuse, the anterior angles somewhat produced in front and rather broadly rounded, the surface very finely, closely, and distinctly punctured; elytra rather more shining and a little wider than the prothorax, of a brighter, almost bluish, bronze-colour, the base not margined within, moderately long, very little compressed at the sides, strongly gibbose ovate, almost regularly convex, with rows of coarse longitudinal impressions placed upon rather shallow striæ (the punctures here and there confluent, the parts of the striæ between the impressions on the disc very shallow and scarcely below the level of the interstices), the interstices broad, convex towards the sides, feebly so on the disc, very minutely and sparingly punctured, the second to the ninth in the female confluent a little before the apex and together (in a line with the fifth) forming a large rounded lateral protuberance; beneath black, shining, smooth; prosternum horizontal, strongly acuminately produced, slightly excavate within between the coxæ, its anterior face also excavate.

Length 18 millim.; breadth 8 millim. (♀.)

Hab. Guatemala (*coll. Stuttgart Museum*).

One example. This insect is closely allied to *H. mexicanus*; the female, however, differs from the same sex of that species in having the prothorax shorter and broader, with the anterior angles less prominent and more broadly rounded; the head more

shining; the elytra more ovate, not grooved within at the base; the interstices broader and less convex on the disc, the second to the ninth confluent just before the apex and together produced into a broad rounded lateral prominence.

15. **Hegemona costaricensis.** (Tab. XII. fig. 5, ♀.)

Bronze, with a slight greenish tinge, very shining. Head very sparingly and minutely punctured, the epistoma defined posteriorly by a not very deeply impressed groove, the vertex sometimes with a shallow longitudinal impression, and the epistoma sometimes with a transverse one; prothorax subquadrate, as long as broad in the male, shorter in the female, the sides straight from the middle to the base, slightly narrowed in the apical third, the anterior angles rounded and produced in front, the surface very minutely, sparingly, and shallowly punctured; elytra globose-ovate, very strongly gibbous, a little wider than the prothorax at the base, the humeri not prominent, regularly punctate-striate, the interstices broad, flat on the disc from the base to the apex, convex towards the sides only, almost impunctate, the apices slightly produced; beneath smooth, shining: apex of the prosternum subtuberculiform.

Length 18½–19 millim.; breadth 8–9 millim. (♂ ♀.)

Hab. Costa Rica (*Sallé, Van Patten*), Volcan de Irazu (*Rogers*).

This species will readily be known by the broad, flat interstices and regularly punctate-striate elytra, the latter almost pear-shaped and raised considerably above the level of the thorax.

16. **Hegemona interruptus.** (Tab. XII. fig. 6, ♀.)

Bronze, with a very slight greenish tint, shining. Head very shallowly, finely, and sparingly punctured, the groove separating the epistoma somewhat deeply impressed and subangularly extended in the middle behind, very shallow laterally; prothorax broad, transverse, the sides slightly rounded and about equally narrowed at the base and apex, the anterior angles broadly rounded, the disc with a smooth narrow central line which is slightly raised at the base, the surface punctured like the head; elytra short, broad, strongly gibbous, rounded at the sides, the width of the prothorax at the base, deeply striate, the striæ coarsely crenate-punctate (the punctures here and there confluent), the interstices strongly angularly raised (as in *H. filibuster*), greatly interrupted and more or less irregular beyond the middle and also at the sides, transversely or obliquely wrinkled within, and impunctate, the apices slightly produced; beneath more shining, almost smooth; apex of the prosternum produced into a rounded conical tubercle.

Length 19 millim.; breadth 10 millim. (♀.)

Hab. Costa Rica (*Van Patten*).

One example. This insect is allied to *H. filibuster*, but differs in the very coarsely punctured elytral striæ, and the much more interrupted and irregular subangular interstices.

17. **Hegemona filibuster.**

Eucamptus flibuster, Thoms. Revue Zool. 1856, p. 475, t. 23. f. 4[1].
Hegemona flibuster, Allard, Mittheil. der schweiz. ent. Ges. v. pp. 61, 254[2].

Hab. ? Mexico (*coll. Oberthür, ex coll. Mniszech*); British Honduras, Belize (*Blancaneaux*); Guatemala, Lanquin (*Champion*); Nicaragua (*coll. Brit. Mus., F. Bates, Sallé*), Chontales (*Belt, Janson*); Costa Rica[1 2].

Many examples. *H. filibuster* will be at once known by its very broad form, the

strongly angularly raised interstices, the finely punctured striæ, and the very brilliant bronzy upper surface; the numerous specimens before me vary in size from 20–24½ millimetres. I have not seen this insect from Costa Rica.

DINOMUS.

Dinomus, de Brême, Revue Zool. 1842, p. 113; Lacordaire, Gen. Col. v. p. 444.

This genus was established by the Marquis de Brême upon a single species from Mexico. *Dinomus* was unknown to Lacordaire, who merely reproduced the original description; the genus is not represented in any of the large Mexican collections before me.

1. **Dinomus perforatus.**

Dinomus perforatus, de Brême, Rev. Zool. 1842, p. 114[1].

Hab. Mexico[1].

Group **HELOPIDES.**

This group already contains about 370 described species; it represents the Group IV., the "Hélopides vrais," of Lacordaire's tribe Hélopides. Till the publication of Allard's elaborate monographic revision of the "Hélopides vrais" (from which several North-American as well as many Magellanic or Antarctic species are omitted) the very large number of species were principally contained in the genus *Helops*; the few known Tropical-American forms being mostly referred to *Nautes* and *Tarpela*.

Dr. Horn, in his revision of the Tenebrionidæ of America north of Mexico (Trans. Am. Phil. Soc. new ser. xiv. p. 253, and Trans. Am. Ent. Soc. viii. p. 152), places the whole of the North-American species in the one genus *Helops*.

Allard, however, in his (more recent) revision has divided *Helops* into a large number of genera and subgenera, four or five only of which appear to be represented in the New World, by far the greater majority of genera and species being from the north temperate zone.

From the large number of species (74) now recorded from Central America it will be seen that tropical regions also contain a considerable number of 'Helopides,' some of which (both apterous and winged) are of brilliant metallic colours; a very large proportion of these are described as new. I am unable to identify a single one of our species with those of North America, representatives of many of which I have before me for comparison; we have not, however, any material from the more northern Mexican States, and some of the species described from Texas and Arizona may yet be found to extend into our region.

Nautes is here placed at the head of the group on account of its affinity with certain "Cnodalonides."

The different species are found upon herbage; or by beating the withered still-attached leaves of fallen trees; or beneath loose bark.

NAUTES.

Nautes, Pascoe, Journ. Ent. ii. p. 475 (1866); F. Bates, Ent. Monthly Mag. vi. p. 270 (1870) (pars); Allard, Rév. Hélopides, L'Abeille, xiv. p. 6 (pars); Mittheil. der schweiz. ent. Ges. v. pp. 19, 58, & 245 (pars).

I take *N. fervidus* as the type of this New-World genus, and include in it such species as seem to have a close affinity with that insect; some metallic species, however, here referred to *Tarpela* might almost as well be included in *Nautes*, the structure of the pro- and mesosterna proving, at least in *Tarpela*, to be a variable character.

Nautes, thus understood, contains a considerable number of species, nearly all of which appear to be peculiar to our region; so far as at present known, the genus ranges from Mexico to Colombia, and is also represented in the Antilles. The numerous additional species now known renders some addition necessary to the definition of the genus, a single species only (*N. fervidus*) being known to the original describer. As understood here it will not include *N. eximius*, F. Bates, nor the Texan *Helops farctus*, Lec. The species are, with some few exceptions, of brilliant metallic colours and often very shining, and suggestive of some of the genera of the preceding group, the "Cnodalonides." The head is deeply sunk into the prothorax, short, rarely long (*N. striatipennis*); in the more typical species very short, a little convex, and with the epistoma confounded with the front; in others shallowly, rarely deeply, transversely impressed in front. The prothorax is transverse, sometimes nearly twice as broad as long, very strongly margined, the margins usually thickened, and very closely embraces the elytra; the anterior angles are broad and rather prominent, but usually more or less rounded (in one species, *N. antennatus*, subtriangularly produced, thus resembling certain forms of *Tarpela*); in most of the shorter and more convex species (both apterous and winged) the base is very strongly bisinuate, and has the central portion somewhat produced and rounded, and the margin sometimes very indistinct or obsolete. The strongly margined elytra vary in shape from moderately long and subparallel to very short and gibbous; in the short, very convex or gibbous (apterous) species the sutural stria is quite obsolete, though deeply impressed in the others. The mesosternum is V-shaped, and more or less deeply excavate; usually horizontal and with the raised sides quite vertical in front, in others the raised sides more rounded off above. The prosternum (or prosternal process) is always produced; in the more typical species (*N. fervidus*, &c.) quite horizontal and acuminately produced; in the shorter and more convex species it is, as might be expected, broader and shorter. The metasternum is variable in length; shorter in the apterous species; in one, *N. enoplopoides*, exceedingly short. The elytral epipleuræ are abbreviated at the last ventral suture. The legs in

most of the species comparatively smooth. The anterior tarsi have the three basal joints equal in width, often very short, and usually dilated in the male, the third joint more or less deeply excised or bilobed, the fourth joint quite small and short and deeply sunk into the third. The hind tibiæ in a few of the apterous species, *N. versicolor* &c., are a little sinuous, or swollen in the middle of the inner side in the male. The intercoxal process is more or less triangular, though very broad and almost rounded in *N. enoplopoides*. The scutellum is large in the winged species, smaller in the apterous forms; in one or two of these latter (e. g. *N. nitidissimus* and *N. nodulosus*) very small. The males of most of the winged species have the ventral segments 1–3, or 1 and 2, a little flattened in the middle, and this part closely and finely punctured, and usually pubescent. In the apterous species the ventral surface of the male is sculptured as in the female.

Nautes will doubtless prove eventually to be well represented in Tropical South America.

a. *Species winged; the ventral segments* 1–3 *more or less flattened and closely punctured, and usually pubescent, along the middle in the male.*

1. **Nautes fervidus.** (Tab. XII. fig. 7, ♀.)

Nautes fervidus, Pascoe, Journ. Ent. ii. p. 476[1]; Allard, Rév. Hélopides, L'Abeille, xiv. p. 6[2]; Mittheil. der schweiz. ent. Ges. v. pp. 58 & 245[3].

Nautes æneus, F. Bates, Ent. Monthly Mag. vi. p. 270[4]; Allard, Rév. Hélopides, L'Abeille, xiv. p. 7[5]; Mittheil. der schweiz. ent. Ges. v. pp. 58 & 246[6].

Hab. Mexico[1 2] (*coll. F. Bates*), Cordova (*Sallé*[3]), Jalapa (*Höge*); Guatemala, El Tumbador, Las Mercedes, Senahu, Sinanja, Panzos, Teleman, San Juan in Vera Paz (*Champion*); Nicaragua[5] (*coll. F. Bates*[6]), Chontales (*Belt*, *Janson*[4]).

A common species in Central America, though apparently not extending south of Nicaragua. *N. æneus*, F. Bates, as already suggested by Allard (*op. cit.*), is merely a variety of this rather variable insect—the difference of colour and size, the absence of oblique impressions between the eyes, &c., proving to be of no value when a long series is examined. *N. fervidus* varies in size from 6–10 millim.; the male has the ventral segments 1–3 more closely punctured, and very slightly pubescent, in the middle.

An example from Jalapa is figured.

2. **Nautes glabratus.**

Broad ovate, convex, light brownish-æneous, the elytra tinted with green and cupreous, shining. Head short, rather finely and somewhat sparingly punctured, the intraocular space and vertex much smoother, the epistoma scarcely defined posteriorly (the usual groove almost or quite obsolete); antennæ moderately long, ferruginous; prothorax broad, strongly transverse, very strongly margined at the sides and obsoletely so at the base, the lateral margins thickened and reflexed and very narrowly grooved within, the sides a little rounded and converging from the base, the apex deeply emarginate, the anterior angles very broad and narrowly rounded, the base very strongly bisinuate, and with the broadly rounded central portion produced a little beyond the obtuse but prominent hind angles, the basal foveæ almost or quite obsolete, a deep oblique impression on each side (extending almost to the hind angles) a little before the base,

the surface sparingly and subequally punctured, the punctures fine and shallow, and if anything a little closer on the disc, the sides, base, and apex lighter in colour; scutellum triangular, smooth; elytra broad, short, widening a little in their basal fourth, thence subparallel for about one third of their length, the humeri rounded and not prominent, strongly margined, striate, the striæ finely, shallowly, and rather distantly punctured, the interstices flat and almost smooth, slightly cupreous in tint, the suture or second interstice and two ill-defined oblique stripes more or less metallic green; legs ferruginous; anterior tarsi with joints 1–3 equal in width, and dilated in the male, the fourth joint small and quite short; beneath light reddish-brown, shining, very sparingly and finely punctured, the ventral segments 1–3 shallowly longitudinally wrinkled, and in the male closely punctured in the middle, the flanks of the prothorax almost smooth; prosternum closely punctured, horizontal, subacuminately produced; mesosternum V-shaped, horizontal, deeply excavate, its strongly raised sides vertical in front. Body winged.

Length 5 millim.; breadth 3 millim. (♂ ♀.)

Hab. MEXICO, Cordova (*Sallé*).

Three examples. This insect is allied to *N. fervidus* and the Colombian *N. ovatus*, F. Bates *, from both of which it will be known by its smaller size and much shorter elytra; in general shape it more nearly resembles *N. varians* and allies, though differing from these in its longer antennæ, smoother under-surface, and other characters.

3. **Nautes tinctus.** (Tab. XII. fig. 8, ♀.)

Oblong ovate, broad, subparallel, rather depressed, very shining, bright metallic greenish-bronze, the head in front, the sides of the prothorax, the scutellum, and often the extreme base of the elytra, more or less suffused with cupreous. Head shallowly transversely impressed in front, sparingly and moderately finely punctured, the epistoma broadly and shallowly emarginate in front; antennæ ferruginous, the five outer joints rather long, almost equal in length, joints 8–10 subtriangular; prothorax very short, nearly twice as broad as long, rather convex, the lateral margins reflexed and prominent and narrowly grooved within, widest at the base, the sides slightly rounded, gradually narrowing from the base to beyond the middle, thence rapidly and obliquely converging to the apex, the apex rather deeply emarginate, the anterior angles a little prominent and broadly rounded, the base strongly bisinuate and very narrowly but distinctly margined, the basal foveæ deep, a transverse sinuous impression before the base, and a large shallow irregular impression at the sides near the middle, and another within both the anterior and the hind angles in some specimens, the hind angles prominent but obtuse, the surface finely and sparingly but very distinctly punctured on the disc, much more finely and obsoletely so towards the sides; elytra rather long, moderately convex, subparallel to beyond the middle, shallowly depressed on each side at the base some distance within the slightly prominent humeri, wider than the prothorax, finely striate throughout, the striæ with fine distantly placed impressions, the impressions finer towards the sides and coarsest on the basal half of the disc, the interstices broad, and perfectly flat and smooth throughout; legs purplish-cupreous, the tarsi lighter; anterior tarsi in the male with the three basal joints a little dilated and equal in width (narrower in the female), the fourth joint small and short; beneath very shining, with metallic golden, cupreous, and greenish tints, the flanks of the prothorax very shallowly and sparingly strigose, the ventral segments 1–3 longitudinally wrinkled and very sparingly punctured, and in the male with a longitudinal more closely punctured pubescent space down the middle; prosternum horizontal, subacuminately produced; mesosternum horizontal, short, V-shaped, very deeply concave within, its raised sides vertical in front. Body winged.

Length 8½–12 millim.; breadth 4–5 millim. (♂ ♀.)

Hab. GUATEMALA, Purula and Sabo in Vera Paz (*Champion*).

Six examples. This insect is closely allied to some of the varieties of *N. fervidus*, but flatter and less convex; the basal foveæ of the thorax more deeply impressed, the

* *N. elegans*, F. Bates, described from an unknown locality, is, no doubt, a small individual of *N. ovatus*.

basal margin more distinct; the elytra relatively longer and more parallel, &c.; the ventral segments 1–3 in the male more evidently punctured and pubescent in the middle than in *N. fervidus*.

N. tinctus was only met with in the dense forest of the Atlantic slope, at elevations of from 3500 to 4500 feet.

4. **Nautes splendens.**

Oblong ovate, rather convex, very shining, bright metallic greenish-bronze, with cupreous or green reflections. Head somewhat closely and moderately finely punctured, the vertex smoother, the epistoma almost truncate in front and limited behind by a shallow groove, a shallow rounded impression on each side before the eyes; antennæ moderately long, reaching to about one-third of the length of the elytra in the male, joints 8–10 subtriangular, equal in length, the apical one rather longer than the tenth, brownish piceous; prothorax short, strongly transverse, rather convex, the lateral margins reflexed and prominent and narrowly grooved within, widest at the base, the sides slightly sinuate behind, very gradually narrowing from the base to beyond the middle, thence rapidly and obliquely converging to the apex, the apex deeply emarginate, the anterior angles prominent and narrowly rounded, the base strongly bisinuate, the basal foveæ deep, a distinct rounded impression on each side within the prominent subrectangular hind angles, and an oblique one on each side just within the anterior margin opposite the inner limit of the eye, the surface finely and sparingly punctured on the disc, more closely so at the sides (rather more finely so than the head); elytra convex, moderately long, if anything widest beyond the middle, very feebly rounded at the sides, very shallowly or obsoletely striate, the striæ with fine but deep not very closely placed elongate impressions, the impressions becoming coarser towards the sides, and finer towards the apex, the interstices flat and exceedingly minutely and sparingly punctured, a row of coarse irregular impressions on each side within the lateral margin, rather variable in colour—green with an oblique bronze stripe from the shoulder to the apex, or, more rarely, bronze, with one or two ill-defined broad greenish stripes, the suture tinged with cupreous; legs blackish-bronze, the tarsi lighter; anterior tarsi in the male as in *N. tinctus*; beneath shining, brownish-bronze, very shallowly and finely punctured, the metasternum almost smooth, the ventral segments 1–3 also longitudinally wrinkled, 1 and 2 with a flattened pubescent space along the middle in the male, the flanks of the prothorax very shallowly strigose externally; prosternum subhorizontal, acuminately produced; mesosternum narrow, V-shaped, deeply concave within, its raised sides vertical in front. Body winged.

Length 5–10 millim.; breadth 3–5½ millim. (♂ ♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species is perhaps nearest allied to *N. tinctus*, though more ovate and more convex, and comparatively shorter than that insect.

Like many others of this group, *N. splendens* varies greatly in size; in one or two of the largest female examples the usual lightly impressed elytral striæ are almost obsolete. I met with *N. splendens* in abundance about the margins of the forest on the slope of the Volcan de Chiriqui. A single specimen only was captured at Bugaba.

5. **Nautes belti.** (Tab. XII. fig. 9, ♂.)

Nautes belti, Allard, Mittheil. der schweiz. ent. Ges. v. pp. 59 & 248[1].

Hab. Nicaragua, Chontales (*colls. F. Bates & Haag* [1], *Belt*, *Janson*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

The single female example from the Volcan de Chiriqui differs from the numerous

Nicaraguan specimens before me in having the thorax more finely and sparingly punctured; a male from Bugaba, however, agrees well with the type, and differs only in its very small size, $4\frac{1}{3}$ millim. The ventral segments 1–3 are flattened, closely punctured, and pubescent along the middle in the male, as in the allied species.

6. **Nautes varians.** (Tab. XII. fig. 10, ♀.)

Ovate, rather broad, convex, variable in colour—usually of a metallic bluish-green, rarely greenish-bronze, the sides of the elytra, the suture, and the prothorax at the base and apex often cupreous, shining. Head coarsely and somewhat closely punctured, the punctures here and there obliquely or longitudinally confluent, the vertex smoother; epistoma short, broadly and feebly emarginate in front, and limited behind by a rather deep transverse groove; eyes small; antennæ short, joints 8–10 subtriangular, the three or four outer joints flatter and broader than those preceding, piceous or black; prothorax convex, very short, almost twice as broad as long, narrowly but very distinctly margined, the sides converging from the base in the female, a little more rounded in the male, the apex deeply emarginate, the anterior angles obtuse though rather broadly subtriangularly produced in front, the base strongly bisinuate, very feebly margined, and with the very broadly rounded central portion produced a little beyond the obtuse hind angles, the basal foveæ almost or quite obsolete, the surface more or less coarsely and closely punctured at the sides and more finely and sparingly so on the disc, the punctures somewhat longitudinal in form and frequently (especially at the sides) longitudinally confluent; scutellum with a few scattered punctures, often of a cupreous or golden tint; elytra broad, short, strongly convex, somewhat rounded at the sides, usually widest a little beyond the middle in the female, more parallel in the male, deeply striate, the striæ finely punctate outwardly and shallowly so on the disc, the interstices flat or feebly convex and almost smooth; legs bronze-black, the femora almost smooth, the tibiæ closely punctured; anterior tarsi in the male with the three basal joints dilated, the fourth joint quite small; beneath bronze-black, shining, very coarsely and closely punctured, the ventral surface towards the apex much more finely and sparingly so and also longitudinally wrinkled, the ventral segments 1–3 in the male closely punctured and pubescent along the middle, the flanks of the prothorax very finely and shallowly strigose; prosternum coarsely punctured, subhorizontal, acuminately produced; mesosternum V-shaped, deeply excavate within, its raised sides rather abruptly rounded off in front. Body winged.

Length $4\frac{1}{3}$–8 millim.; breadth $2\frac{1}{2}$–$4\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates, Sallé*), Juquila (*Höge*), Playa Vicente (*Sallé*).

Var. The head and prothorax more coarsely punctured, the interstices more convex, the metasternum much smoother in the middle (the coarse punctures more confined to the sides), the flanks of the prothorax more coarsely strigose externally, the ventral surface more strongly longitudinally wrinkled.

Hab. Mexico, Capulalpam, Yolos, Parada (*Sallé*).

Captured in plenty by Herr Höge at Juquila; one or two specimens only from each of the other localities. The variety is connected with the type by intermediate forms, though, at first sight, apparently distinct. This is a species with comparatively short, convex elytra; a very short thorax, the sides of which converge from the base; and short antennæ, with the three or four outer joints flattened and comparatively short and broad. *N. varians* is connected with the other species of the genus by intermediate forms. A typical example from Juquila is figured.

7. **Nautes antennatus.** (Tab. XII. fig. 11, ♂.)

Broad ovate, short, convex, bright metallic green, the head and prothorax with golden-cupreous reflections. Head short, closely, somewhat coarsely, and subequally punctured, the frontal region somewhat broadly

triangularly flattened; epistoma short, truncate in front, and limited behind by a rather deep transverse groove; antennæ moderately long, joints 1–7 slender, 8 distinctly wider than 7 and triangular, 9–11 somewhat flattened, about equal in width, much wider than 8 (9 about as long as wide, 10 subtransverse, both widening outwardly), and together forming a distinct club, piceous, the outer joints black; prothorax broad, very strongly transverse, not very convex, finely margined, the margins shallowly grooved within, the sides a little rounded at the middle, thence very slightly and obliquely narrowing to the base, more rapidly converging and very feebly sinuate anteriorly, the apex deeply emarginate, the anterior angles broadly and subtriangularly produced, the base strongly bisinuate, very obsoletely margined, and with the central portion somewhat produced and rounded in the middle, the basal foveæ almost obsolete, the hind angles subrectangular, the surface closely and comparatively coarsely punctured (the disc similarly though more sparingly punctured than the head), the outer third on each side much more coarsely so and the punctures here longitudinally confluent, a broad, shallow, longitudinal impression on each side just behind the eyes; scutellum large, scutiform, smooth, cupreous in tint; elytra broad, short, subparallel in their basal third, widest beyond the middle, together broadly rounded at the apex, the humeri rounded and not prominent in front, deeply striate, the striæ finely and closely punctured on the disc and more coarsely so at the sides, the interstices feebly convex, flatter on the disc, and very minutely and sparingly punctured; legs slender, the tibiæ coarsely roughened and punctured and distinctly pubescent; beneath bronze-black, shining, slightly pubescent, the metasternum somewhat coarsely punctured at the sides, smoother in the middle, the ventral segments 1–3 more finely and sparingly punctured and also longitudinally wrinkled, and in the male very finely and closely punctured in the middle, the flanks of the prothorax with exceedingly coarse confluent impressions; prosternum subhorizontal, closely punctured, subacuminately produced, the apex with a small projecting point; mesosternum V-shaped, moderately deeply excavate, the raised sides gradually rounded off in front. Body winged.

Length $5\frac{1}{2}$–$5\frac{2}{3}$ millim.; breadth $3\frac{1}{4}$–$3\frac{1}{2}$ millim. (♂.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

Two examples. This insect will be known at once from its nearest allies, *N. varians*, &c., by the structure of the antennæ, *e. g.* joints 9–11 broad and somewhat flattened (forming a 3-jointed club) and the others comparatively slender; the short thorax and elytra, the former rather flat, with prominent anterior angles, and the disc longitudinally impressed on each side in front; the slender legs, broad ovate form, &c. *N. antennatus* may possibly have to be separated from *Nautes* eventually; it is, however, connected with the more typical species by intermediate forms *.

8. **Nautes breviceps.** (Tab. XII. fig. 12.)

Ovate or broad ovate, short, strongly convex, greenish- or golden-bronze, shining. Head very short, very coarsely, rather closely, and subequally punctured, the punctures more or less transverse in shape; epistoma short, truncate in front, and not defined posteriorly; antennæ rather short, in the male reaching to about one third of the length of the elytra, slender, distinctly widening outwards, joints 8–10 subtriangular, the apical joint half as long again as the tenth in the male, piceous; prothorax short, nearly twice as broad as long, convex, strongly margined, the margins very narrowly grooved within, the sides rather rapidly converging from the base and a little rounded before the middle, the apex broadly but not deeply emarginate, the anterior angles broad and somewhat rounded, the base very strongly bisinuate, finely but distinctly margined, and with its central portion broadly rounded and a little produced, the basal foveæ obsolete, the surface somewhat finely and sparingly punctured on the disc and much more coarsely and closely so towards the sides, the punctures more or less longitudinal in form and here and there longitudinally confluent at the sides; scutellum broad, scutiform, smooth; elytra short, strongly convex,

* The fragmentary remains of an insect from Yzabal, Guatemala, in the Sallé collection, apparently represent a species allied to *N. antennatus*.

almost gibbous, slightly rounded at the sides, the humeri rounded and not prominent, deeply striate, the striæ finely and distantly punctured, the punctures rather coarser outwardly and indistinct towards the suture, the interstices rather convex throughout and almost smooth; legs slender, rather short, somewhat closely punctured; anterior tarsi with the three basal joints equal in width, narrow, and very little wider in the male, the fourth joint small; beneath dark reddish-brown, shining, very sparingly and finely punctured, the ventral segments 1–3 shallowly longitudinally wrinkled and more closely punctured in the middle in the female, 1 and 2 flattened and very closely punctured and pubescent along the middle in the male, the flanks of the prothorax almost smooth; prosternum rather broad, horizontal, a little produced; mesosternum short, V-shaped, not very deeply excavate, its narrowly raised sides vertical in front. Body winged.

Length $3\frac{1}{2}$–5 millim.; breadth $2\frac{1}{3}$–3 millim. (♂ ♀.)

Hab. Panama, David and Caldera in Chiriqui (*Champion*).

Numerous examples. This species will be identified by its small size, convex form, short and deeply striate elytra, rather convex interstices, very short thorax, the anterior angles of which are not prominent, short and very coarsely punctured head, &c. *N. breviceps* cannot be confounded with any other species recorded here, though in its short broad ovate form it superficially resembles *N. varians*; in general shape it somewhat resembles *Phædon*, a genus of Chrysomelidæ. The anterior tarsi are scarcely dilated in the male, the three basal joints comparatively narrow.

9. **Nautes striatipennis.** (Tab. XII. fig. 13, ♂.)

Oblong ovate, moderately convex, subparallel, brownish-bronze, the prothorax rather more golden in tint, not very shining. Head broad, very closely and rather coarsely punctured, the punctures here and there confluent, the epistoma large, broadly emarginate in front, and defined posteriorly by a shallow groove, a transverse space on the vertex impunctate; antennæ long, nearly reaching to the middle of the elytra in the male, the outer joints long and not wider than the preceding, brownish or piceous; prothorax broad, transverse, the lateral margins reflexed and prominent but not grooved within, the sides slightly rounded and converging from a little before the base, the apex deeply emarginate, the anterior angles broadly produced and rounded, the base strongly bisinuate and shallowly margined, the hind angles subrectangular, the basal foveæ shallow, the surface very closely and somewhat coarsely punctured, a narrow longitudinal space on the basal half of the disc impunctate; scutellum transverse, smooth; elytra subparallel, rather long, deeply striate throughout, the striæ indistinctly punctured, the interstices almost flat and finely and sparingly punctured, the margins impunctate within; beneath more shining, greenish-bronze, rather closely and coarsely punctured, the flanks of the prothorax somewhat coarsely strigose, the ventral segments 1 and 2 in the male very closely and finely punctured (but not distinctly pubescent) along the middle; prosternum horizontal, very strongly acuminately produced; mesosternum horizontal, V-shaped, very deeply concave within, its strongly raised sides quite vertical in front; legs stout, the tibiæ roughly and closely punctured; tarsi stout, the three basal joints of the anterior pair in the male a little dilated. Body winged.

Length $10\frac{1}{2}$–13 millim.; breadth 5–$5\frac{1}{2}$ millim. (♂.)

Hab. Mexico (*coll. Oberthür*), Tehuantepec (*Sallé*).

Two examples, both males. This distinct species will be known by its comparatively elongate form, the very closely and somewhat coarsely punctured head and thorax, and the deeply striate elytra, the striæ almost impunctate; in the structure of the pro- and mesosternum it agrees perfectly with the typical forms of *Nautes*. *N. striatipennis* cannot be satisfactorily compared with any other species here recorded.

b. *Species apterous; the ventral surface in the male sculptured as in the female.*

10. **Nautes magnificus.**

Broad ovate, short, strongly convex, metallic green, the head in the middle, the prothorax transversely in great part, and the elytra longitudinally or obliquely, much suffused with fiery cupreous, very shining. Head somewhat coarsely but not very closely punctured, scarcely visibly impressed in front, the epistoma broadly but not deeply emarginate; antennæ rather long, widening a little outwardly, about reaching to the middle of the elytra in the male, joints 8–10 subtriangular and rather long, the apical joint about as long as the tenth, bronze-black, the basal joint paler; prothorax short, nearly twice as broad as long, strongly margined (the margins reflexed and thick), the sides converging from the base and rounded and more rapidly narrowing from the middle to the apex, the anterior angles broadly rounded and rather prominent, the apex arcuate emarginate, the hind angles prominent, the base very strongly bisinuate and almost immarginate, the basal foveæ obsolete, the surface punctured like the head, though rather more strongly and sparingly so; scutellum triangular, transverse, comparatively small; elytra short, broad, very convex, almost gibbous, strongly margined, the width of the prothorax at the base, rounded at the sides, widest in the middle, the humeri rounded and not prominent, deeply striate, the striæ more or less finely punctured, the scutellar stria obsolete, the interstices feebly convex on the disc and strongly so at the sides and apex, smooth; legs stout, comparatively smooth, the anterior tarsi with the three basal joints strongly dilated in the male, bronze-black, the tibiæ and femora suffused with metallic green and cupreous; beneath very dark brownish-bronze, with metallic green and cupreous tints, shining, very sparingly though rather coarsely punctured, the ventral surface (the first segment excepted) much more finely punctured and also coarsely longitudinally wrinkled, the flanks of the prothorax with a few very widely scattered shallow punctures and wrinkles; prosternum coarsely punctured, broadly horizontally produced and received by the deeply excavate V-shaped mesosternum, the sides of the latter vertical in front though rounded off above. Body apterous.

Length 7–10 millim.; breadth $4\frac{1}{2}$–6 millim. (♂ ♀.)

Hab. GUATEMALA, Purula, Teleman, and San Juan in Vera Paz (*Champion*).

Six examples. This exceedingly vividly-coloured insect will be known by its short, broad, almost gibbous shape, and other characters given above; in general form it bears a strong superficial resemblance to members of the genus *Chrysomela*.

I only met with *N. magnificus* on the Atlantic slope and in or near the Polochic valley; it occurred at elevations situated between 1000 and 4000 feet.

11. **Nautes chrysomeloides.** (Tab. XII. fig. 14, ♂.)

Closely resembling *N. magnificus* and differing as follows:—broader and more convex; the head and prothorax much more finely punctured; the prothorax a little longer, wider, more convex (the reflexed margins in consequence not so distinctly visible from above), and more rounded at the sides; the rest as in *N. magnificus*.

Length 8–$10\frac{1}{2}$ millim.; breadth $5\frac{1}{4}$–$6\frac{3}{4}$ millim. (♂ ♀.)

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*).

Four examples. Though closely allied to *N. magnificus* I believe this insect represents a distinct species.

12. **Nautes versicolor.** (Tab. XII. fig. 15, ♀.)

Broad ovate, strongly convex, bright metallic green, very much suffused with fiery cupreous, golden, and purplish tints, these tints on the prothorax taking the form of angulated transverse bands, and on the elytra of longitudinal or oblique stripes, very shining. Head broad, shallowly transversely impressed in front, rather sparingly and somewhat finely punctured, the epistoma truncate in front; palpi and antennæ

ferruginous; the latter long, fully reaching to the middle of the elytra in the male, joints 8–10 long and very slightly widening outwardly, the apical joint in both sexes a little shorter than the tenth; prothorax broad, transverse, convex, strongly margined, the sides a little rounded at the middle, sinuate (and a little widening in the female) behind, and obliquely converging anteriorly, the anterior angles broad and prominent and narrowly rounded, the apex deeply arcuate emarginate, the hind angles subacute and very prominent, the base very strongly bisinuate and shallowly but distinctly margined, the basal foveæ obsolete, the surface punctured like the head, only much more coarsely so; scutellum small; elytra rather broader than the prothorax at the base, altogether broader and almost gibbous in the female, strongly margined, the humeri a little prominent, deeply striate, the striæ finely punctured, the scutellar stria obsolete, the interstices feebly convex on the disc, strongly so at the sides and apex, and very minutely and sparingly punctured; legs comparatively smooth, brownish-bronze, the tarsi ferruginous, the latter long and rather slender; anterior tarsi with the three basal joints a little dilated, and the hind tibiæ slightly sinuous in the middle, in the male; beneath shining, brownish-bronze, with golden-green tints, the middle of the metasternum and the first two ventral segments with scattered coarsish punctures, the flanks of the prothorax and prosternum with scattered coarser impressions, the ventral surface also shallowly longitudinally wrinkled; prosternum horizontal, broadly produced, and received by the deeply excavate V-shaped mesosternum, the sides of the latter vertical in front though rounded off above. Body apterous.

Length 7–8 millim.; breadth 4–4¾ millim. (♂ ♀.)

Hab. Guatemala, El Tumbador (*Champion*).

Two examples. This insect resembles *N. magnificus* and *N. chrysomeloides*, but is still more vividly coloured; it will be known from either by the antennæ being more slender, and ferruginous in colour; the thorax sinuate at the sides behind the middle, and distinctly margined at the base; the scutellum smaller; the elytra more ovate, and much narrower in the male; the legs more slender; the tarsi longer, and ferruginous in colour, and not nearly so strongly dilated in the male, &c.

13. **Nautes læviventris.** (Tab. XII. fig. 16, ♀.)

Ovate, short, very convex, unicolorous bronze, rather dull, the elytra a little more shining. Head short, unimpressed, the epistoma slightly emarginate in front and not defined, very finely and very sparingly punctured, the vertex almost smooth; antennæ (female) rather short and slender, piceous; prothorax short, transverse, strongly margined, the sides very slightly rounded and rather rapidly converging from the base, the anterior angles a little prominent and broadly rounded, the apex arcuate emarginate, the hind angles prominent, the base very strongly bisinuate and almost immarginate, the basal foveæ obsolete, the surface with indications of minute scattered obsolete punctures, almost smooth; scutellum moderately large, triangular; elytra a little wider than the prothorax at the base, gibbous, rounded at the sides, the humeri slightly prominent, finely striate, the striæ with distantly placed fine punctures, the scutellar stria obsolete, the interstices smooth and slightly convex; legs almost smooth, dark brownish-bronze, the anterior tarsi (female) with the three basal joints moderately broad; beneath shining, very dark bronze, impunctate, the ventral surface with shallow scattered longitudinal wrinkles, the flanks of the prothorax smooth; intercoxal process triangular; metasternum short, with a rounded impression in the middle in front, and longitudinally impressed in the middle behind; prosternum narrow, horizontal, acuminately produced and received by the narrow V-shaped deeply concave mesosternum, the sides of the latter subvertical in front though rounded off above. Body apterous.

Length 6 millim.; breadth 3½ millim. (♀.)

Hab. Guatemala, Cubilguitz in Vera Paz (*Champion*).

One example. This insect will be identified by its broad ovate form, gibbous elytra,

smooth thorax and under surface, narrow and acuminately produced prosternum, and other characters noticed above.

14. **Nautes hilaris.**

Ovate or broad ovate, very convex, bright golden-bronze, sometimes with a slight greenish tint. Head rather short, shallowly transversely impressed in front, closely and somewhat coarsely punctured anteriorly, the vertex very much smoother, the epistoma subtruncate in front; antennæ rather long, widening a little outwardly, not quite reaching to the middle of the elytra in the male, the apical joint about as long as the tenth, ferruginous; prothorax short, broad, strongly transverse, strongly margined, the sides gradually converging from the base, a little rounded about the middle, and more rapidly narrowing anteriorly, the anterior angles a little prominent and rather broadly rounded, the apex arcuate emarginate, the hind angles somewhat acute, the base immarginate and very strongly bisinuate, the basal foveæ very shallow, the surface sparingly and moderately finely (though deeply) punctured, a narrow ill-defined longitudinal space on the centre of the disc impunctate; scutellum triangular, rather small; elytra a little broader than the prothorax at the base, very convex, altogether broader and almost gibbous in the female, rounded at the sides, the humeri a little prominent, finely punctate-striate, the punctures distantly placed and still finer and almost obsolete behind, the scutellar stria obsolete, the interstices almost flat, smooth; legs almost smooth, brownish-bronze, the tarsi ferruginous or fusco-ferruginous, the three basal joints of the anterior tarsi a little dilated in the male; beneath shining, very dark bronze, the ventral surface finely and very sparingly punctured and shallowly longitudinally wrinkled, the flanks of the prothorax very shallowly wrinkled; intercoxal process triangular; metasternum short, with scattered very coarse impressions on its anterior half, the side-pieces almost smooth; prosternum horizontal, rather broad, broadly produced and received by the deeply excavate V-shaped mesosternum, the sides of the latter vertical in front. Body apterous.

Length 5–6½ millim.; breadth 2½–3⅔ millim. (♂ ♀.)

Hab. GUATEMALA, San Gerónimo (*Champion*).

Three examples. This species differs from *N. læviventris* by its more shining surface, impressed head, distinctly punctured and differently shaped (more rounded at the sides and not so rapidly converging from the base) thorax, broader prosternum, coarsely punctured metasternum, &c.

15. **Nautes nitidissimus.** (Tab. XII. fig. 17, ♂.)

Oblong ovate, convex, golden-bronze, the prothorax with a slight greenish tint, very shining. Head very shallowly transversely impressed on each side in front, sparingly and rather finely punctured, the vertex smoother; antennæ long, fully reaching to the middle of the elytra in the male, very slightly widening outwardly, piceous; prothorax broad, transverse, narrowly margined, somewhat transversely convex, the sides rounded about the middle, sinuate but not widening (if anything narrowing a little in the male) from the middle to the base, and narrowing anteriorly, the anterior angles broadly produced and rounded, the apex arcuate emarginate, the hind angles prominent, the base very strongly bisinuate and almost immarginate, the basal foveæ quite shallow, the disc (in one example) shallowly impressed before the base, the surface finely and rather sparingly punctured; scutellum comparatively very small, transversely triangular; elytra a little broader than the prothorax at the base, convex, rather short, the humeri prominent in front and distinctly grooved within for the reception of the hind angles of the prothorax, rounded at the sides, constricted on each side before the apex, the apex a little produced, very finely and lightly punctate-striate, the punctures distantly placed, the interstices perfectly flat and exceedingly minutely and sparingly punctured; legs greenish-bronze, very sparingly punctured; anterior tarsi with the three basal joints equal in width, the hind tibiæ in the male a little swollen in the middle of the inner side; beneath bright greenish-bronze, the ventral surface shallowly longitudinally wrinkled and very sparingly and finely punctured, the flanks of the prothorax with a few very coarse punctures within (anteriorly) and smooth without; intercoxal process very broad; metasternum very short, impressed in

the middle in front; prosternum broad, roughly punctured and grooved, horizontal, broadly produced; mesosternum horizontal, V-shaped, very deeply concave, the raised sides quite vertical in front. Body apterous.

Length 6–9¼ millim.; breadth 3¼–4½ millim. (♂ ♀.)

Hab. MEXICO, Cordova (*Sallé*), Jalapa (*Höge*).

Two examples, apparently male and female. This species has a different facies from any other here recorded; it resembles *N. fervidus* in its brilliant bronzy colour, but it will be at once known from that insect by its less parallel form; the thorax much wider anteriorly, more convex, and more narrowly margined; the elytra narrowed towards the base, constricted behind, and with more prominent humeri; the very much smaller scutellum; absence of wings, &c.

16. **Nautes nodulosus.** (Tab. XII. fig. 18, ♂.)

Broad ovate, short, very convex, bright-bronze or greenish-bronze, the head and prothorax usually golden-cupreous in tint. Head very shallowly transversely impressed in front, rather coarsely and not very closely punctured, the vertex much smoother; antennæ long, fully reaching to the middle of the elytra in the male, widening a little outwardly, joints 9 and 10 long and subtriangular, the apical joint as long as the tenth, ferruginous or fusco-ferruginous; prothorax broad, strongly transverse, strongly margined, the sides gradually converging from the base, and rounded and more rapidly narrowing from the middle to the apex, the anterior angles wide, prominent, and broadly rounded, the apex deeply arcuate emarginate, the hind angles prominent, the base very strongly bisinuate and scarcely perceptibly margined, the basal foveæ very shallowly impressed, the surface more sparingly and rather more coarsely punctured than the head; scutellum small, triangular, transverse; elytra a little wider than the prothorax at the base, short, transversely gibbous, rounded at the sides, a little constricted before the apex, the apex slightly produced, the disc somewhat flattened behind, the humeri slightly prominent, deeply striate, the striæ finely and rather distantly punctured, the interstices impunctate, feebly convex (nearly flat on the basal half of the disc), and each at the sides and on the posterior half with a row of distantly placed smooth conical elevations; legs rather slender, smooth, dark bronzy-cupreous, the tarsi long; anterior tarsi with the three basal joints slightly dilated, and the hind tibiæ a little sinuous, in the male; beneath very dark bronze, shining, the ventral surface almost smooth; metasternum short, with exceedingly coarse scattered impressions, the side-pieces smooth; intercoxal process broad, margined in front, and with some scattered coarse impressions within; flanks of the prothorax smooth; epipleuræ smooth, abruptly narrowed and sinuous at the last ventral suture; prosternum roughly punctured, horizontal, broadly produced; mesosternum horizontal, very deeply excavate, V-shaped, the raised sides vertical in front. Body apterous.

Length 6–8½ millim.; breadth 3⅓–5 millim. (♂ ♀.)

Hab. GUATEMALA, Purula, Sinanja, Sabo, Senahu, and San Juan in Vera Paz (*Champion*).

Many examples. This insect will be readily identified by the rows of smooth conical elevations on the sides and posterior half of the elytra and other characters given above; it is allied to *N. nitidissimus*, *N. magnificus*, &c., and like those species appears to be confined to the forest-region of the Atlantic slope.

17. **Nautes enoplopoides.** (Tab. XII. fig. 19, ♂.)

Bronze-black, rotundate-ovate, short, very convex, rather dull. Head short, broad, at most very feebly transversely impressed in front, rather coarsely but not very closely punctured, the vertex almost smooth;

antennæ stout, very long, reaching to the middle of the elytra in the male, very slightly widening outwardly, joints 8–10 long, the apical joint in the male rather longer than the tenth, piceous-black; prothorax very broad, strongly transverse, strongly margined, the margins thickened, the sides gradually converging from the base, and rounded and more rapidly narrowing from the middle to the apex, the anterior angles very broad and prominent and rounded, the apex deeply arcuate emarginate, the hind angles prominent, the base strongly bisinuate and immarginate, the basal foveæ quite obsolete, the surface very shallowly, finely, and sparingly punctured (much more shallowly and finely so than the head); scutellum small, triangular, strongly transverse; elytra a little longer than the prothorax at the base, short, broad, gibbous, still more inflated in the female, strongly margined, rounded at the sides, the humeri not prominent, regularly punctate-striate, the punctures fine and distantly placed, the scutellar stria obsolete, the interstices flat or feebly convex and almost smooth; legs comparatively smooth, very stout, black; tarsi very stout, and still stouter and with the three basal joints of the anterior pair strongly and equally dilated in the male; beneath rather more shining, dark brownish-piceous; metasternum short, exceedingly coarsely or rugulosely punctured, the side-pieces smooth; ventral surface longitudinally wrinkled, the first segment also sparingly punctured; flanks of the prothorax almost smooth; intercoxal process broad, rounded and strongly margined in front; epipleuræ smooth, very broad at the base, gradually narrowing to the last ventral suture; prosternum very broad, shallowly grooved in the middle, a little declivous though broadly (but not strongly) produced and received by the deeply excavate V-shaped mesosternum, the sides of the latter vertical in front though rounded off above. Body apterous.

Length $5\frac{2}{3}$–8 millim.; breadth $3\frac{3}{4}$–$5\frac{1}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, Chiacam, Sinanja, Panzos, and San Juan in Vera Paz (*Champion*).

Numerous examples. This insect cannot be compared with any of the species here described; it will be known by its subrotundate gibbous form, dull bronze-black colour, stout legs, strongly dilated male anterior tarsi, and other characters given above; in general shape *N. enoplopoides* resembles the Old-World genus *Enoplopus*. This species also is apparently confined to the forest-region of the Atlantic slope, and to elevations lying between 1000 and 3000 feet.

TARPELA.

Tarpela, F. Bates, Ent. Monthly Mag. vi. p. 272 (1870); Allard, Rév. Hélopides, L'Abeille, xiv. p. 4; Mittheil. der schweiz. ent. Ges. v. pp. 19, 56, & 236 (pars).

Lamperos, Allard, loc. cit. p. 4; loc. cit. pp. 57, 241.

I place a large number of heterogeneous species in this genus, including those referred to it by its original describer; and also those included in it by Allard, with the exception of *T. inanis*. The structure of the pro- and mesosterna as a generic character cannot, in my opinion, be considered to have the importance attributed to it by the author of the genus, unless supported by other characters. The numerous recently discovered Central-American species connect *T. browni* and *T. tenuicornis* with *T.* (*Nautes*) *eximia*, *T. foveipennis*, *T. costata*, &c.; these latter have the pro- and mesosterna formed as in *Nautes*—*e. g.* the prosternum horizontal and acuminately produced, the mesosternum horizontal, V-shaped, and with the strongly raised sides quite vertical in front. The seven species (including *T. eximia*) with the pro- and mesosterna thus formed are also very coarsely sculptured above and differ very markedly from *Nautes*. All the other species here referred to *Tarpela* have the pro- and mesosterna more or less declivous. Amongst the Central-

American representatives several groups of species, each of a different facies (and differing considerably in sculpture, &c.), are to be met with: *T. browni*, *T. thoracica*, *T. atra*, *T. cupreo-viridis*, *T. puncticeps*, *T. ærifera*, *T. silvicola*, and *T. cisteliformis* are species of this kind, each of these having several close allies, though all are connected by more or less intermediate forms. The characters usually of generic value, such as the structure of the pro- and mesosterna, tarsi, antennæ, epipleuræ, &c., seem to be of very little value here. All the species, with the exception of two, are winged; some few have the ventral segments 1–3 a little flattened (in *T. depressa* broadly concave) and closely punctured and pubescent along the middle in the male, as in the winged forms of *Nautes*. Doubtless many North-American winged species, as well as some Old-World forms, belong to this genus as understood here.

Section A. *Anterior angles of the prothorax very strongly (sometimes acutely) produced; upper surface more or less bronze, moderately shining; epipleuræ abbreviated; anterior tarsi with the three basal joints rather broad, about equal in width, and scarcely dilated in the male.*

a. *Prosternum a little declivous, slightly convex behind or with the apex produced into a broad or narrow point; mesosternum declivous, rather feebly excavate.*

* *Species winged.*

1. Tarpela browni.

Tarpela brownii, F. Bates, Ent. Monthly Mag. vi. p. 272, t. 2. f. 4[1]; Allard, Rév. Hélopides, in L'Abeille, xiv. p. 7[2]; Mittheil. der schweiz. ent. Ges. v. pp. 56 & 236[3].

Hab. NICARAGUA[2 3], Chontales (*Janson*[1], *Belt*); PANAMA, Volcan de Chiriqui (*Champion*).

Mr. F. Bates's description of the prosternum of *Tarpela*, presumably including this species and *T. oblongo-punctata*, is apparently drawn from the latter: in *T. browni* the prosternum is not nearly so strongly declivous and very distinctly produced, the apex a little raised; in *T. oblongo-punctata* it is exactly as described, "bent down behind the anterior coxæ and then expanded and terminating in a broad point."

2. Tarpela tenuicornis. (Tab. XII. fig. 20, ♀.)

Ovate, moderately convex, brownish-æneous, more or less tinged with green, moderately shining. Head coarsely and very closely punctured, the punctures longitudinally or obliquely confluent, deeply transversely impressed in front; eyes small; antennæ moderately long, slender, the three outer joints a little widened and flattened, piceous, the basal joint paler; prothorax comparatively narrow, transverse, the base and apex about equal in width, the sides angularly extended a little before the middle and sinuate behind, the anterior angles very strongly and narrowly produced, the apex with the central part a little rounded, raised, and somewhat produced in front, the posterior angles rectangular, the base strongly bisinuate, the basal foveæ usually rather deep, the disc with a strong sinuous transverse impression (sometimes only appearing as a long oblique deep fovea on each side) before the base, the lateral

margins very slightly extended, narrow, and scarcely reflexed, the surface punctured like the head but still more coarsely so, the punctures longitudinally confluent on the anterior portion of the disc, and obliquely so at the sides and base; elytra comparatively short, subparallel in the male, widest a little beyond the middle in the female, much wider than the prothorax, shallowly, transversely, and broadly impressed below the base and the central portion transversely swollen in the female, with regular rows of very deep and coarse transverse impressions, the impressions much finer and shallower posteriorly and each with a very minute granular point on each side, the interstices almost impunctate, the third and the seventh from the base nearly to the apex (where they become confluent) and the fifth for about two thirds of its length very sharply raised, the others at the sides and beyond the middle also more or less costate; legs coarsely and very closely punctured, the tibiæ still rougher; beneath brownish-piceous, shining, coarsely punctured, the metasternum in the middle and the ventral surface much more finely and sparingly so, the flanks of the prothorax coarsely punctured; mesosternum declivous in front, narrowly but not very deeply excavate; prosternum slightly declivous behind, the apex produced into a small point.

Length $4\frac{1}{4}$–$6\frac{1}{2}$ millim.; breadth 2–3 millim. (♂ ♀.)

Hab. GUATEMALA, Cerro Zunil, Zapote (*Champion*).

Many examples. This species on account of the peculiar sculpture of the elytra cannot be confounded with any other here described; in general structure it agrees very well with *Tarpela browni*, though comparatively shorter in form.

3. Tarpela oblongo-punctata.

Tarpela oblongo-punctata, F. Bates, Ent. Monthly Mag. vi. p. 273 [1]; Allard, Rév. Hélopides, L'Abeille, xiv. p. 7 [2]; Mittheil. der schweiz. ent. Ges. v. pp. 56 & 237 [3].

Hab. MEXICO [2] (*colls. F. Bates* [1 3], *Mus. Brit.*).

Two examples only of this species are known to me: one in Mr. F. Bates's collection, and another in the British Museum.

4. Tarpela inæqualis. (Tab. XII. fig. 21, ♂.)

Oblong ovate, subparallel, rather convex, bright greenish-bronze, with a slightly cupreous tint, shining. Head closely and somewhat coarsely punctured, the space between the eyes confluently and very much more coarsely so, broadly and triangularly flattened (the depression reaching to the vertex), the epistoma limited behind by a distinct but shallow groove; antennæ rather short, not reaching to one third of the length of the elytra in the male, piceous; prothorax short, transverse, strongly margined, the lateral margins broadly but shallowly grooved within, widest towards the base, the sides almost straight or scarcely narrowing in their basal third and obliquely converging from the middle to the apex, the apex very deeply emarginate, the anterior angles broadly and strongly and subtriangularly produced in front, the base bisinuate, strongly margined, and a little depressed within, the basal foveæ rather deep, the hind angles subrectangular, the disc shallowly longitudinally impressed and with a rounded impression on each side externally, the surface rather coarsely, sparingly, and very irregularly punctured, the punctures here and there longitudinally confluent on the disc (more frequently so at the sides and there coarser and much more closely placed), the sides, base, apex, and a narrow longitudinal space on the disc bronzy-cupreous, the rest greenish; elytra convex, rather long, subparallel to beyond the middle, the humeri broadly rounded, with rows of moderately coarse distantly placed short longitudinal impressions, the impressions here and there confluent and gradually becoming very much coarser and deeper towards the sides and finer and shallower towards the apex, the interstices very sparingly and finely punctured, rather uneven, flat on the disc and apical portion and more or less raised and irregular towards the sides, a row of coarse deep impressions on each side within the lateral margin, the suture and base narrowly, the impressions, and the sides bronzy-cupreous, the rest greenish; legs dark bronze, the tarsi lighter, the

anterior tarsi in the male a little dilated; beneath shining, brownish-bronze, very sparingly and finely punctured, the metasternum almost smooth, the ventral segments 1–3 rather strongly longitudinally wrinkled, and in the male with a flattened, closely punctured, pubescent space down the middle, the flanks of the prothorax very shallowly strigose; prosternum a little declivous, subacuminately and convexly produced; mesosternum declivous, narrow, moderately excavate within.

Length 7–8½ millim.; breadth 3½–4½ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

Two examples, one of each sex. This insect somewhat resembles *Nautes splendens*, but is more parallel; the head and thorax are much more closely and not nearly so finely punctured, the anterior angles of the latter more produced; the elytra are relatively longer, with rows of much coarser impressions, and not striate; the prosternum is differently formed, &c. The sculpture of the elytra is similar to that of *T. ærifera*; the species seems best placed near *T. oblongo-punctata*.

5. **Tarpela torrida.** (Tab. XII. fig. 22, ♂.)

Oblong ovate, moderately convex, dark brownish-bronze, slightly shining. Head coarsely and confluently punctured, the frontal impression shallow, the epistoma feebly but distinctly emarginate; antennæ short, distinctly widening outwardly, the penultimate joints subtriangular, the apical joint in the male a little longer than the tenth, piceous; prothorax transverse, broad, rather strongly margined, the sides slightly sinuate or almost straight behind the middle and narrowing a little and feebly sinuate anteriorly, the anterior angles very strongly and angularly produced in front, the hind angles rectangular, the base feebly bisinuate, the basal foveæ shallow, the disc longitudinally impressed in the middle behind, the surface very closely and coarsely punctured, the punctures sinuously or longitudinally confluent; elytra a little wider than the prothorax, rather long, the humeri a little produced in front and grooved within for the reception of the hind angles of the prothorax, subparallel or a little rounded at the sides, deeply punctate-striate from the base to the apex, the scutellar stria deep, the punctures coarse, oblong, and rather closely placed, the interstices convex throughout and scarcely visibly punctured; femora sparingly but rather coarsely, the tibiæ closely and roughly, punctured; the entire surface beneath coarsely and closely punctured, the flanks of the prothorax confluently so, the punctures here and there longitudinally confluent at the sides; prosternum gradually declivous, rather convex behind, the apex sometimes armed with a short conical prominence; mesosternum feebly excavate.

Length 6–8½ millim.; breadth 3–4 millim. (♂ ♀.)

Hab. Mexico, Ventanas in Durango (*Höge*).

Five examples. Of the species here enumerated *T. torrida* most nearly resembles *T. durangoensis*, but differs in being winged; and in having the epistoma more shallowly emarginate; the thorax less convex, wider posteriorly, and with rather more acute anterior angles; the scutellum larger; the humeri more prominent; the under surface still more coarsely punctured, &c.; the prosternum is formed much as in that species.

Compared with *T. browni*, *T. foveipennis*, &c., it has the thorax much straighter at the base; and the elytra deeply punctate-striate (in this respect approaching *T. costata*), instead of having rows of coarse longitudinal impressions.

In one of the female examples the elytral striæ are much more finely punctured than in the others; I do not think, however, that it represents more than a variety of this insect.

** *Species apterous.*

6. **Tarpela durangoensis.**

Oblong ovate, moderately convex, dark brownish-bronze, slightly shining. Head shallowly impressed in front, the epistoma distinctly arcuate emarginate, coarsely, very closely, and confluently punctured; eyes comparatively large; antennæ rather short, the third joint not twice the length of the second, the three outer joints wider and equal in length, 9 and 10 subtriangular, piceous, the basal joint lighter; prothorax transversely convex, broader than long, the sides slightly and about equally narrowed before and behind the middle, feebly sinuate before the base, and narrowly but very distinctly margined, the anterior angles broadly and very strongly produced in front and a little rounded, the hind angles subrectangular, the base very feebly bisinuate, almost straight in the middle, the basal foveæ almost obsolete, the surface punctured like the head but with the punctures rather more regular and not so frequently confluent; scutellum transverse, sparingly punctured; elytra distinctly wider than the prothorax, subtruncate at the base, the sides straight in front, a little rounded beyond, slightly transversely swollen in the middle, deeply punctate-striate throughout, the scutellar stria deep, the punctures oblong in form, rather coarse, and closely placed, the interstices convex and almost smooth; tibiæ roughly and closely punctured, the femora smoother; the entire surface beneath (including the flanks of the prothorax) coarsely and closely punctured, the punctures here and there longitudinally confluent at the sides; prosternum rounded off and declivous, the apex not produced; mesosternum rather deeply excavate. Body apterous.

Length 7 millim.; breadth $3\frac{1}{3}$ millim. (♀.)

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

A single example.

7. **Tarpela corpulenta.** (Tab. XII. fig. 23.)

Oblong ovate, strongly convex, dark brownish-bronze, slightly shining. Head very coarsely, closely, and confluently punctured, broadly flattened in front, the epistoma distinctly emarginate, the usual transverse impression very shallow; eyes small; antennæ short, slightly passing the base of the prothorax, rather stout, widening outwardly, the third joint not twice the length of the second, the penultimate joints subtriangular, the apical joint longer than the tenth; prothorax very narrowly margined, strongly longitunally convex, broader than long, the sides rounded about the middle, very slightly and somewhat obliquely (not sinuously) narrowing behind, and more distinctly narrowing and rather strongly sinuate anteriorly, the anterior angles very strongly and subacutely produced in front, the base very feebly bisinuate (almost straight), the basal foveæ nearly obsolete, the hind angles subrectangular, the surface very closely and coarsely punctured, the punctures here and there longitudinally or sinuously confluent; elytra strongly convex, subtruncate, and slightly wider than the prothorax at the base, a little rounded at the sides, deeply punctate-striate throughout, the sutural stria deep, the punctures oblong in form, rather coarse, and somewhat closely placed, the interstices convex and almost smooth; legs short, closely and coarsely punctured, the femora smoother; the entire surface beneath (including the flanks of the prothorax) coarsely and closely punctured; prosternum declivous, the apex not produced; mesosternum very narrow, feebly excavate. Body apterous.

Length $6\frac{1}{2}$–$7\frac{1}{3}$ millim.; breadth 3–$3\frac{2}{3}$ millim. (♀.)

Hab. Mexico, Ventanas in Durango (*Höge*).

Three female examples. This apterous species will be at once known from *T. durangoensis* by its very convex form, small eyes, the sides of the thorax sinuate in front (the anterior angles in consequence narrower and more acute), &c.; it is allied also to the Texan *Helops farctus*, Leconte (placed in *Nautes* by Allard), but is very much smaller and narrower than that apterous insect.

b. *Prosternum horizontal, strongly acuminately produced; mesosternum more or less horizontal, its raised sides vertical in front, deeply excavate. Species winged.*

8. **Tarpela thoracica.** (Tab. XII. fig. 24.)

Oblong ovate, subparallel, moderately convex, brownish-æneous, with a slight golden tint, moderately shining. Head slightly pilose, very coarsely and somewhat closely punctured, the intraocular space exceedingly coarsely so and the punctures here longitudinally or obliquely confluent, the usual transverse depression very broad and deep and extending backwards to beyond the eyes and there ending in a rounded impression; eyes oblique, narrow, convex; antennæ rather stout, ferruginous, the four outer joints darker and a little wider; prothorax very uneven, though a little flattened, transverse, broad, as wide anteriorly as at the base, the sides very feebly sinuate behind the middle, slightly narrowing and rounded just before the apex, and irregularly and coarsely crenulate in their apical half, the anterior angles very strongly and broadly produced (extending as far as the front of the eyes) in front and narrowly rounded, the apex very deeply emarginate and with the central third almost straight and somewhat raised, the hind angles subrectangular, the base very strongly bisinuate, the basal foveæ broad and deep, the disc longitudinally impressed in the middle (more distinctly so towards the base), the surface punctured (the disc usually rather more sparingly) like the middle of the head; elytra wider than the prothorax, a little flattened on the disc, with rows of very coarse deep longitudinal not very closely placed impressions, the impressions towards the sides slightly coarser and there placed in larger and shallower excavations, the interstices very evidently though sparingly punctured, rather irregular and here and there transversely connected one with another, slightly convex outwardly, and the third, fifth, and seventh sinuously costate towards the apex, the humeri prominent in front; legs coarsely punctured, the tibiæ still more closely and roughly so; beneath of a golden-brassy tint, more or less tinged with green, shining, very coarsely but not closely punctured, the middle of the metasternum much smoother, the flanks of the prothorax very coarsely strigose; mesosternum horizontal, V-shaped, deeply excavate within, its raised sides vertical in front; prosternum horizontal, strongly acuminately produced.

Length $7\frac{1}{2}$–$9\frac{3}{4}$ millim.; breadth $3\frac{2}{3}$–5 millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt*).

Six examples. This species, though differing greatly in the structure of the prosternum, is evidently allied to *T. browni*.

9. **Tarpela reticulata.**

Allied to *T. thoracica* and differing as follows:—The entire surface sparsely but distinctly pubescent; the prothorax broader, more widened anteriorly, the sides more distinctly sinuate behind the middle and more coarsely crenulate in front, the anterior angles exceedingly prominent, the surface very coarsely and rugosely punctured; the scutellum larger; the elytra longer and more parallel, more abruptly narrowed at the shoulders (somewhat as in *T. costata*), the humeri rounded off and not prominent in front (the base in consequence straighter), with rows of very coarse and deep longitudinal impressions from the base to the apex, the impressions still coarser towards the sides, the interstices very irregular and almost smooth, the third, fifth, and seventh costate (the impressions thus forming double rows, the interspaces being transversely connected one with another), the surface clothed with scattered suberect hairs; the under surface very coarsely punctured, the flanks of the prothorax very coarsely strigose; the rest as in *T. thoracica*.

Length 11 millim.; breadth $5\frac{2}{3}$ millim. (♂?)

Hab. HONDURAS (*Dyson, in Mus. Brit.*).

A single example of this distinct species is contained in the National collection.

10. **Tarpela costata.** (Tab. XII. fig. 25.)

Oblong ovate, subparallel, moderately convex, brownish-æneous, with a slight golden tint, rather dull, slightly pubescent, the elytra clothed with short scattered suberect hairs. Head as in *T. thoracica*, but with the

intraocular space still more coarsely and confluently punctured; antennæ rather more slender towards the base than in *T. thoracica*; prothorax much as in *T. thoracica*, but with the entire surface still more coarsely and closely punctured, the punctures exceedingly coarse and obliquely or longitudinally confluent; elytra rather more parallel (at least in the male) than in *T. thoracica*, with regular rows of coarse deep longitudinal closely placed impressions from the base to the apex, the interstices about as wide as or scarcely wider than the rows of impressions (the sutural interstice from the end of the sutural row much the broadest), regularly and strongly convex throughout, and almost smooth, the humeri prominent in front; femora very coarsely and rather closely punctured, the tibiæ still more closely and roughly so; beneath golden-bronze, more shining, exceedingly coarsely punctured, the middle of the metasternum smoother, the punctures on the sides and ventral surface more or less longitudinally confluent, the flanks of the prothorax very coarsely strigose; mesosternum horizontal, V-shaped, deeply excavate within, its raised sides vertical in front; prosternum horizontal, strongly acuminately produced.

Length 7–8¼ millim.; breadth 3⅓–4 millim. (♂ ♀.)

Hab. Mexico, Acapulco (*Höge*).

Six examples. This species will be readily identified by the peculiar sculpture of the elytra, the exceedingly coarsely punctured thorax and under surface, and the sparingly pilose surface.

11. **Tarpela foveipennis.** (Tab. XII. fig. 26.)

Elongate ovate, moderately convex, subparallel, brownish-bronze, with a slight greenish tint, not very shining. Head very broadly transversely impressed in front, and with a shallow rounded impression between the eyes, very coarsely, closely, and subequally punctured, clothed with short scattered decumbent hairs, the labrum densely fringed with fulvous hair; antennæ rather short, piceous; prothorax very uneven, transverse, widest about the middle, the sides sinuate and a little narrowed before the base, slightly rounded, and about equally narrowing anteriorly, and rather strongly margined, the margins coarsely crenulate before the middle, the anterior angles broadly and strongly produced and rounded, the apex with the central part almost straight and slightly raised, the posterior angles subrectangular, the base strongly bisinuate and very distinctly margined, the basal foveæ broad and deep, the disc with traces of a smooth impressed central line and with a shallow rounded impression on each side above (and within) the foveæ, the surface subequally punctured like the head but rather more coarsely so, the punctures mostly separate one from another, of a greener tint than the head or elytra; elytra wider than the prothorax, long, subparallel, the humeri a little prominent, with rows of very coarse deep longitudinal impressions, the impressions shorter, finer, and much more closely placed on the basal fifth, if anything finer outwardly, and at the sides and apex placed in large shallow excavations, the interstices sparingly but very distinctly punctured, rather irregular, somewhat raised, and here and there transversely confluent towards the sides and apex, the third, fifth, and seventh sinuously costate behind, of a brownish-bronze tint; legs coarsely, the tibiæ very roughly and confluently, punctured, clothed with short decumbent hair, the inner sides of the tibiæ and the femora beneath with longer hair; beneath greenish-bronze, shining, very coarsely punctured, the flanks of the prothorax very coarsely strigose; mesosternum subhorizontal, V-shaped, moderately deeply excavate within, its raised sides subvertical in front though rounded off above; prosternum horizontal, strongly acuminately produced.

Length 12⅓ millim.; breadth 5½ millim.

Hab. Mexico, Chiapas (*Sallé*).

One example. This species is closely allied to, and of the size of, *T. thoracica*; it differs, however, in the head being less deeply impressed in front, and more equally punctured; the thorax more rounded at the sides and rather strongly sinuate before the base, with the anterior angles less produced, and the surface more equally punctured; the legs more pubescent and more coarsely punctured; the mesosternum a little rounded

off at the sides in front, &c. The elytra are sculptured as in *T. thoracica*; the interstices are, however, more distinctly punctured.

12. Tarpela sculptilis.

Allied to *T. foveipennis* and differing as follows:—The antennæ more slender; the prothorax rather flatter, the sides more strongly sinuate towards the base, a little wider behind, less strongly margined, not quite so coarsely punctured, the punctures here and there longitudinally confluent (especially on the basal half of the disc), and without trace of a smooth central line; the elytra comparatively shorter, with regular rows of coarse moderately deep longitudinal impressions, the impressions somewhat closely placed (still more closely so on the disc at the base and there more or less confluent) and not coarser outwardly, the interstices almost flat and scarcely visibly punctured, the third, fifth, and seventh slightly costate (but not sinuously so) before the apex; mesosternum horizontal, V-shaped, deeply excavate within, its raised sides vertical in front; prosternum horizontal, strongly acuminately produced; beneath brownish-bronze, very coarsely punctured, the flanks of the prothorax very coarsely strigose.

Length $9\frac{1}{4}$ millim.; breadth $4\frac{1}{2}$ millim.

Hab. Mexico, Jalapa (*Höge*).

One example.

13. Tarpela eximia. (Tab. XIII. fig. 1, ♂.)

Nautes eximius, F. Bates, Ent. Monthly Mag. vi. p. 271 [1]; Allard, Rév. Hélopides, L'Abeille, xiv. p. 6 [2]; Mittheil. der schweiz. ent. Ges. v. pp. 59 & 249 [3].

Hab. Nicaragua [2] (*coll. F. Bates* [3]), Chontales (*Janson* [1], *Belt*).

14. Tarpela veræpacis. (Tab. XIII. fig. 2, ♂.)

Oblong ovate, convex, subparallel, brownish-æneous, slightly tinged with green or golden, shining. Head coarsely and somewhat closely punctured, the punctures here and there longitudinally confluent at the sides, rather deeply transversely impressed in front; antennæ comparatively long, reaching nearly to the middle of the elytra in the male, widening a little outwardly, piceous, paler towards the base; prothorax transverse, broad, the sides a little sinuate but not narrowing behind the middle and very slightly narrowing in the apical third (as wide before the middle as at the base in the male), strongly margined, the margins narrowly grooved within but not crenulate, the anterior angles strongly triangularly produced in front and narrowly rounded or subacute, the apex with the central part almost straight and somewhat raised, the base bisinuate but not strongly so, the basal foveæ deep, the disc transversely impressed behind, the hind angles subrectangular, the surface punctured like the head but more coarsely and more irregularly so, the disc smoother and much more sparingly punctured; elytra subparallel, convex, wider than the prothorax at the base, the humeri rather prominent, the scutellar region more or less depressed, the scutellar stria very deeply impressed, with rows of short more or less longitudinal closely placed impressions from the base to the apex, the impressions comparatively fine on the disc and here placed upon shallow striæ and becoming very much coarser outwardly, the interstices almost impunctate, broad and almost flat on the disc, narrower and slightly convex outwardly, and the third raised and subcostate just before the apex, with two ill-defined sinuous cupreous stripes on either side outwardly extending from the shoulder to the apex; legs coarsely and closely punctured; beneath golden- or greenish-bronze, rather coarsely but sparingly punctured, the ventral surface also longitudinally wrinkled, the sides of the metasternum and the flanks of the prothorax very coarsely punctured, the ventral segments 1 and 2 in the middle in the male a little flattened and pubescent and more finely punctured; mesosternum horizontal, V-shaped, deeply excavate, its raised sides vertical in front; prosternum horizontal, strongly acuminately produced.

Length $5\frac{3}{4}$–$7\frac{1}{2}$ millim.; breadth $2\frac{2}{3}$–$3\frac{1}{2}$ millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo (*Champion*).

Four examples. This species is perhaps nearest allied to *T. eximia*, from which it will be known by the head being rather longer and not so deeply excavate in front; the antennæ longer; the thorax flatter, less narrowed and straighter at the sides anteriorly; the elytra with the interstices flatter, and the rows of impressions much finer and more lightly impressed on the disc; and the upper surface not nearly so vividly coloured.

Section B. *Anterior angles of the prothorax less prominent (rarely rounded); upper surface varying from dull dark bronze to bright metallic bronzy-green. Species winged.*

1. *Upper surface dull, scarcely shining; prothorax narrowly margined; anterior tarsi with the three basal joints rather broad, about equal in width, and sometimes a little widened in the male.*

a. *Epipleuræ extending almost uninterruptedly to the apex of the elytra.*

15. **Tarpela atra.** (Tab. XIII. fig. 3.)

Tarpela atra, Allard, Rév. Hélopides, L'Abeille, xiv. pp. 7 & 46 [1]; Mittheil. der schweiz. ent. Ges. v. pp. 56 & 237 [2].

Hab. Mexico (*coll. F. Bates* [1 2]), Puebla (*Sallé* [1 2]), Matamoros Izucar, Sayula in Jalisco (*Höge*).

The two examples from Sayula differ from the numerous specimens of *T. atra* before me in having the elytra a little shorter, and with the rows of impressions rather coarser on the disc; I do not think they represent more than a local variety of that insect.

16. **Tarpela jalapensis.**

Elongate ovate, subparallel, bronze or greenish-bronze, rather dull, sometimes a little shining. Head rather long, closely and confluently and somewhat coarsely punctured, shallowly transversely impressed in front and also feebly impressed between the eyes; prothorax subquadrate, rather convex, very feebly margined, transverse or nearly as long as broad, the sides rounded at the middle, narrowing and sinuate behind and less distinctly so anteriorly, the anterior angles somewhat produced and a little prominent, the apex feebly emarginate, the hind angles subrectangular or subacute, the base feebly bisinuate (almost straight), the basal foveæ very shallow or obsolete, the surface very closely, equally, and rather coarsely punctured (the punctures separate one from another); elytra much wider than the prothorax, subparallel, subtruncate at the base, the humeri rounded, with rows of elongate moderately coarse impressions, the impressions more or less confluent (thus forming striæ), the interstices flat, very distinctly but sparingly punctured, and with traces of shallow transverse wrinkles; legs (including the femora) very closely and coarsely punctured, pubescent; beneath closely and somewhat coarsely punctured, the ventral surface and the metasternum in the middle more sparingly so, the former also longitudinally wrinkled, the flanks of the prothorax more coarsely and confluently punctured; mesosternum feebly excavate; prosternum strongly declivous behind, the apex armed with a short erect conical tubercle; epipleuræ extending to the apex of the elytra.

Length $8\frac{1}{2}$–12 millim.; breadth $3\frac{1}{3}$–$4\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico (*coll. Oberthür*), Jalapa (*Höge*).

Eight examples. This species is allied to *T. atra*, from which it is separated by the longitudinal impressions on the elytra being much shorter and finer (not coarser outwardly as in *T. atra*) and confluent (thus forming striæ); the legs are pubescent, the femora still more closely and coarsely punctured; the prosternum, though similarly declivous, is armed with a short conical tubercle at the apex (in *T. atra* it is almost simple), &c.

17. Tarpela högei.

Closely resembling *T. jalapensis*, and differing as follows:—The head shorter, more confluently punctured, the frontal impression deeper; the antennæ more slender, the third joint comparatively much longer, reddish-brown in colour, the three apical joints darker; the prothorax shorter and more transverse, the apex still more feebly emarginate, the anterior angles less prominent and obtuse, the sides not sinuate before the base but gradually narrowing to the obtuse hind angles, the punctures more or less confluent; the elytra with the base straight in the middle, the humeri obliquely cut off and not prominent and broadly and shallowly impressed within, the rows of confluent elongate impressions rather more deeply impressed, the interstices much more finely and more sparingly punctured; the legs more slender, though (including the femora) equally coarsely punctured; the prosternum only slightly transversely raised at the extreme apex.

Length $8\frac{2}{3}$ millim. (♀.)

Hab. Mexico, Ventanas (*Höge*).

One example. From *T. oblonga* and *T. socia* it will be known by its less prominent humeri, more coarsely punctured femora, complete epipleuræ, &c.

18. Tarpela setigera. (Tab. XIII. fig. 4, ♀.)

Elongate ovate, subparallel, narrow, dark reddish-brown, with a slight bronzy tint, slightly shining, sparingly clothed with short bristly hair. Head long, shallowly transversely impressed in front, very closely, equally, and rather coarsely punctured; antennæ (female) short, closely punctured, dark reddish-brown, the basal joint red: prothorax rather narrow, transverse, convex, very narrowly margined, the sides rounded, widest about the middle, very feebly sinuate behind, and a little more narrowed towards the base than in front, the angles obtuse, the apex feebly emarginate (straight when viewed from above), the surface very closely, coarsely, and equally punctured, the disc with a smooth central line in the basal half, the base almost straight, the basal foveæ indistinct; elytra considerably wider than the prothorax, long, subparallel, the base truncate in the middle, the humeri rounded, with rows of short, longitudinal impressions, the impressions closely placed, somewhat coarse and deep, and not coarser outwardly, the interstices very slightly convex and very finely and sparingly punctured; legs (including the femora) closely, coarsely, and roughly punctured, thickly clothed with very short hairs; beneath pubescent, sparingly and somewhat coarsely punctured, the metasternum more coarsely and closely so at the sides, the flanks of the prothorax confluently punctured; prosternum rounded off and declivous, the apex not produced; mesosternum very shallowly excavate; epipleuræ extending to the apex of the elytra.

Length 9 millim.; breadth $3\frac{1}{3}$ millim. (♀.)

Hab. Mexico, Cordova (*Sallé*).

One example. This species in its general form, and in the shape of the thorax, prosternum, &c., nearly agrees with *T. atra*; it differs from that insect in being clothed with short bristly hairs, and in this respect somewhat resembles *T. hispidula*.

b. *Epipleuræ abbreviated.*

19. Tarpela contigua.

Oblong ovate, dull brownish-bronze. Head rather long, very closely, coarsely, and confluently punctured, shallowly transversely impressed in front; antennæ (female) rather short, widening a little outwardly, black; prothorax transverse, the sides rounded about the middle, a little narrowed and sinuate before the base and apex, the anterior angles slightly prominent though obtuse, the hind angles subrectangular, the apex rather shallowly emarginate, the base feebly bisinuate and with the central portion broadly but very slightly produced, the basal foveæ shallow, the surface very closely, coarsely, and subconfluently punctured; elytra much wider than the prothorax, narrowly margined, subtruncate at the base, the humeri rounded, rather convex, the sides almost straight from the base to the middle but widening a little beyond, with rows of deep, longitudinal, subconfluent impressions, the interstices feebly convex throughout, and not visibly punctured; legs (including the femora) coarsely and very closely punctured; beneath dull, the ventral surface finely, shallowly, and sparingly punctured and wrinkled, the flanks of the prothorax coarsely and confluently (though shallowly) punctured, the metasternum at the sides also (though not quite so coarsely) confluently punctured; mesosternum feebly excavate; prosternum declivous behind, the apex produced into a short conical tubercle; epipleuræ narrowed at the last ventral suture, thence narrowly extending to the apex.

Length $7\frac{1}{3}$ millim. (♀.)

Hab. Mexico, Huetamo in Michoacan (*Höge*).

One example. This insect resembles *T. jalapensis* and *T. högei*, but is duller; the elytra are shorter and less parallel, and with feebly convex interstices; the thorax is punctured, and of very nearly the same shape as in *T. högei*, but with more prominent angles; the sides of the metasternum (as well as the flanks of the prothorax) are coarsely and confluently punctured; the prosternum as in *T. jalapensis*.

20. Tarpela oblonga.

Elongate ovate, subparallel, moderately convex, brownish-piceous, with a slight bronzy tinge, dull, scarcely shining. Head rather long, very closely and coarsely punctured, the punctures between the eyes still coarser and irregularly confluent, the usual transverse impression shallow, the epistoma rather long; antennæ rather long, in the male about reaching to the first third of the elytra, reddish-brown or piceous; prothorax somewhat convex, subquadrate, rather broader than long, narrowly margined, widest at the middle, the sides narrowing a little behind and sinuate before the base, and slightly narrowing and feebly rounded from the middle to the apex, the apex rather shallowly emarginate, the anterior angles a little prominent, the base very feebly bisinuate, the basal foveæ very shallow, the hind angles subrectangular, the entire surface coarsely, equally, and subconfluently punctured; scutellum with a few scattered rather coarse punctures; elytra considerably wider than the prothorax, long, subparallel to far beyond the middle, abruptly and obliquely narrowed at the shoulders, the humeri a little prominent in front and grooved within for the reception of the hind angles of the prothorax, with rows of rather coarse, closely placed, short longitudinal impressions, the impressions (including those of the scutellar row) deeper and confluent on the basal third of the disc, becoming a little coarser outwardly, and finer towards the apex, the sutural row from the middle finer, the interstices almost flat on the disc, a little convex outwardly, and sparingly and very finely punctured; tibiæ coarsely roughened and punctured, the femora coarsely and more sparingly punctured; beneath shining, the ventral surface rather coarsely and somewhat closely punctured and also longitudinally wrinkled, the sides of the metasternum very coarsely punctured, the flanks of the prothorax very coarsely strigose; prosternum rounded off and strongly declivous behind, the apex slightly transversely raised; mesosternum rather shallowly excavate; epipleuræ narrowed at the last ventral suture, thence very narrowly continued to the apex.

Length $8\frac{1}{2}$–$10\frac{1}{2}$ millim.; breadth $3\frac{1}{3}$–4 millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*).

Numerous examples. Compared with *T. atra* this species will be known by the head and thorax being still more coarsely and confluently punctured; the antennæ longer, the third joint comparatively much longer; the short longitudinal impressions on the elytra placed closer together, and confluent and very deeply impressed at the base; the femora not so closely punctured; the flanks of the prothorax very coarsely strigose (not coarsely and confluently punctured); the epipleuræ distinctly narrowed at the last ventral suture, &c.

21. **Tarpela socia.** (Tab. XIII. fig. 5, ♂.)

Elongate ovate, moderately convex, subparallel, the head and prothorax dark bronze, the elytra brownish-bronze or dark castaneous, slightly shining. Head coarsely, closely, and irregularly punctured, the punctures here and there confluent between the eyes, shallowly, but broadly, transversely impressed in front, the epistoma comparatively long; antennæ long, reaching to the middle of the elytra in the male, the third joint very long, the joints 8–10 a little swollen outwardly, the apical joint in the male curved and considerably longer than the tenth; prothorax broader than long, narrowly margined, the sides somewhat rounded about the middle, slightly and almost equally narrowing before and behind, a little sinuous before the base, and abruptly so before the apex, and here and there irregularly crenulate anteriorly, the anterior angles a little produced and directed outwards, the apex broadly, but not deeply, emarginate, the base feebly bisinuate, the hind angles subrectangular, the basal foveæ shallow, the disc usually with a shallow curved transverse impression before the base and sometimes with traces of a smooth central line, the surface very closely and coarsely punctured, the basal half of the disc rather more sparingly so; elytra considerably wider than the prothorax, long, subparallel, broader in the female, the humeri a little produced in front, with rows of rather coarse, closely placed, short, longitudinal impressions, the impressions rather deeper and coarser towards the sides and base, finer and shallower behind, and confluent on the basal fourth of the disc, the interstices almost flat, and exceedingly minutely and sparingly punctured; tibiæ closely and roughly punctured, the femora more sparingly so; beneath more shining, sparingly, shallowly, and rather finely punctured, the sides of the metasternum more coarsely so, the flanks of the prothorax coarsely, shallowly, confluently punctured, the last ventral segment in the male pubescent in the middle; prosternum declivous behind, the apex armed with a short, stout, conical tubercle, or transversely raised; mesosternum moderately excavate; epipleuræ narrowed at the last ventral suture, thence narrowly extending to the apex.

Length 10–15¼ millim.; breadth 4–6⅓ millim. (♂ ♀.)

Hab. Mexico, Acapulco (*Höge*).

Numerous examples. More shining than *T. oblonga*; the antennæ longer; the thorax relatively broader, not quite so coarsely punctured, and with much more prominent anterior angles; the elytra broader (especially in the female), and rather more pointed behind, and with the rows of impressions shallower at the base; the under surface more finely and shallowly punctured, the flanks of the prothorax confluently punctured (not coarsely strigose), &c.

22. **Tarpela hispidula.** (Tab. XIII. fig. 6.)

Tarpela hispidula, Allard, Rév. Hélopides, L'Abeille, xiv. pp. 7 & 47[1]; Mittheil. der schweiz. ent. Ges. v. pp. 56 & 238[2].

Hab. Mexico (*coll. F. Bates*[1 2]).

I have only seen two examples of this distinct species, both of which are contained in Mr. F. Bates's collection.

23. **Tarpela azteca.**

Elongate ovate, subparallel, rather depressed, dark brownish-bronze, dull. Head rather short, very closely, coarsely, and subequally punctured, the epistoma limited behind by a rather deep groove; antennæ rather short and stout, the third joint comparatively short, piceous; prothorax subquadrate, very little broader than long, narrowly margined, widest at the middle, the sides slightly narrowing and sinuate behind, and feebly rounded and about equally narrowed anteriorly, the apex rather shallowly emarginate, the anterior angles a little prominent, the base very feebly bisinuate (almost straight), the basal foveæ shallow, the hind angles subrectangular, the disc slightly transversely flattened before the base, the entire surface closely and coarsely punctured, the punctures here and there obliquely or longitudinally confluent; scutellum rather coarsely punctured; elytra long, subparallel to beyond the middle, considerably wider than the prothorax, a little flattened on the disc, the humeri broadly rounded and very slightly produced in front, with rows of rather coarse, closely placed, short longitudinal impressions, the impressions not becoming coarser outwardly, and rather finer towards the apex, the interstices finely and sparingly punctured, and slightly convex throughout, the third, fifth, and seventh rather more strongly raised and subcostate in their posterior half; tibiæ closely and roughly, the femora rather more sparingly, punctured; beneath dark bronze, shining, slightly pubescent, coarsely and closely punctured, the ventral surface rather more finely so and also shallowly longitudinally wrinkled, the flanks of the prothorax coarsely but not very closely punctured, the ventral segments 1 and 2 in the male closely and finely punctured and pubescent along the middle; prosternum gradually declivous, convex behind; mesosternum feebly excavate; epipleuræ much narrowed at the last ventral suture, thence very narrowly extended.

Length 7–8 millim.; breadth 3–3⅓ millim. (♂ ♀.)

Hab. Mexico, Guanajuato (*Sallé*).

Four examples. This insect somewhat resembles *T. atra* and *T. oblonga*, but will be known from both by the shorter head; the coarsely and separately punctured (not confluently punctured or strigose) flanks of the prothorax; the differently formed prosternum (gradually declivous and convex behind); the slightly convex interstices, the third, fifth, and seventh of which are subcostate behind; its rather depressed form, and other characters.

24. **Tarpela subparallela.** (Tab. XIII. fig. 7, ♂.)

Elongate ovate, subparallel, rather depressed, dark brownish-bronze, rather dull. Head short, broad, very closely, coarsely, and subconfluently punctured, the epistoma rather smoother, truncate in front, and limited behind by a moderately deep groove; antennæ long, rather stout, joints 9 and 10 feebly subtriangular, the apical joint in the male scarcely longer than the tenth, clothed with scattered long hairs; prothorax subquadrate, very little broader than long, narrowly but comparatively rather strongly margined, the sides feebly sinuate, scarcely narrowing behind, and very slightly narrowed and rounding anteriorly, the apex feebly emarginate (almost straight when viewed from above), the anterior angles broadly rounded and not prominent and a little deflexed, the base almost straight, the basal foveæ shallow, the hind angles subrectangular, the disc slightly transversely flattened before the base and with traces of a smooth central line, a shallow fovea on each side about the middle just within the lateral margin, the surface closely, somewhat coarsely, and very irregularly punctured, the punctures here and there confluent, the sides and base much more sparingly punctured than the disc; scutellum broad, transverse; elytra long, subparallel, a little depressed on the disc, strongly margined, the humeri rounded externally and very distinctly produced and grooved within in front, with rows of rather coarse, somewhat distantly placed, short longitudinal impressions, the impressions becoming much coarser outwardly,

and finer, longer, and more widely separated towards the apex, the interstices flat on the disc, a little convex towards the sides, and very distinctly punctured; beneath more shining, dark reddish-brown, the flanks of the prothorax and the metasternum at the sides with coarse, scattered impressions, the ventral surface sparingly and finely punctured and longitudinally wrinkled, the last ventral segment in the male hairy at the apex; prosternum declivous, the apex with a very small raised point; mesosternum declivous, very feebly excavate; legs rather long, moderately coarsely but not very closely punctured, the femora a little smoother; epipleuræ abruptly narrowing at the last ventral suture.

Length 10 millim.; breadth $4\frac{1}{3}$ millim. (♂.)

Hab. Mexico (*Sallé, ex coll. Sturm*).

One example. Resembles *T. atra*, from which it is separated by the shorter head, stouter antennæ, broader and more quadrate thorax, prominent humeri (the elytra not truncate at the base as in that species), the impressions on the elytra much coarser and deeper towards the sides, the legs and under surface very much smoother, the flanks of the thorax coarsely but not closely punctured (not shallowly and confluently so), &c.; from *T. azteca* it may be known by the less prominent anterior angles of the thorax, less prominent humeri, flatter interstices, more coarsely punctured elytra, &c.

Helops impolitus, Lec., from Texas, is apparently an ally of this species.

25. **Tarpela fallax.** (Tab. XIII. fig. 8, ♀.)

Oblong ovate, dark bronze, rather dull. Head short, very shallowly transversely impressed in front, very closely, coarsely, and equally punctured, the punctures here and there longitudinally confluent, the epistoma short; antennæ in the male reaching nearly to the middle of the elytra, much shorter in the female, joints 8–10 widening a little outwardly, the apical joint in the male slightly longer than the tenth; prothorax short, transverse, rather convex, somewhat strongly margined, the margins narrowly grooved within, the sides narrowing and rounded anteriorly, and almost straight or feebly narrowing and sinuate behind, the anterior angles narrowly rounded though a little prominent, the apex shallowly emarginate, the hind angles subrectangular, the base feebly bisinuate, the basal foveæ shallow, the disc usually semicircularly impressed before the base and sometimes with a smooth central line, the surface rather coarsely, closely, and subequally punctured; elytra moderately long, wider than the prothorax, subparallel, widest behind the middle in the female, somewhat flattened on the disc, the humeri a little prominent in front, rather deeply striate, the striæ with moderately fine not very closely placed impressions, the interstices almost flat on the disc, very feebly convex outwardly, and minutely and sparingly punctured; tibiæ ronghly and closely punctured, the femora very much smoother; beneath darker bronze, sparingly and not very finely punctured, the ventral surface also strongly longitudinally wrinkled, the flanks of the prothorax rather finely strigose, the ventral segments 1–3 in the male slightly flattened and finely and closely punctured and pubescent along the middle; prosternum declivous, the apex sometimes transversely raised; mesosternum very feebly concave; epipleuræ almost ending at the last ventral suture.

Length $6\frac{1}{2}$–$11\frac{1}{2}$ millim.; breadth 3–$5\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa, Tampico (*Höge*).

Found in plenty by Herr Höge at Jalapa. This species is not very nearly allied to any other described here; it will be identified by its comparatively short head, short and anteriorly narrowed thorax (the anterior angles of which are not prominent), punctate-striate elytra, and other characters mentioned above.

2. *Upper surface shining, metallic bronze or greenish-bronze, rarely* (T. depressa) *brownish-piceous; prothorax more strongly margined, the margins often a little expanded or grooved within; epipleuræ abbreviated.*

* *Anterior tarsi with the three basal joints rather wide; a little dilated in the male.*

26. **Tarpela cupreo-viridis.** (Tab. XIII. fig. 9, ♂.)

Tarpela cupreo-viridis, Allard, Mittheil. der schweiz. ent. Ges. v. pp. 57 & 240[1].

Hab. Guatemala, El Tumbador 2000 to 3000 feet (*Champion*); Nicaragua (*Sallé*), Chontales (*colls. F. Bates & Haag*[1]; *Janson, Belt*).

Four examples captured by myself on the Guatemalan Pacific slope agree well with the long series of Nicaraguan specimens before me. The male of this species, as noted by Allard, has a longitudinal band of pubescence along the middle of the ventral surface; the ventral segments 1–3 are also closely and finely punctured. The prosternum is a little declivous, and then subacuminately produced.

27. **Tarpela marginicollis.**

Oblong ovate, subparallel, brownish-bronze, the head and prothorax sometimes slightly tinged with green, rather dull. Head very shallowly transversely impressed in front, rather coarsely, somewhat closely, and subequally punctured, a transverse space on the vertex almost impunctate, the epistoma broadly but distinctly emarginate; antennæ rather long, reaching to one third of the length of the elytra in the male, joints 8–10 long though decreasing slightly in length, the apical joint as long as the ninth, brownish or piceous; prothorax broader than long, strongly margined, the margins thickened and grooved within, the sides narrowing and feebly sinuate before the middle, and more or less distinctly sinuate and scarcely narrowing behind, the anterior angles broadly produced and narrowly rounded, the hind angles subrectangular, the base bisinuate and distinctly margined, the basal foveæ small but very distinct, the disc with a shallow sinuous transverse impression (more deeply impressed outwardly) before the base, the surface finely (or somewhat coarsely) but not very closely, the disc sometimes more sparingly, punctured; elytra not very convex, wider than the prothorax, long, subparallel, with rows of closely-placed rather fine or moderately coarse punctures, the punctures rarely here and there confluent, and becoming coarser outwardly and finer and shallower towards the apex, the interstices flat on the disc, regularly but very feebly convex outwardly, very shallowly, finely, and sparingly punctured, and the third and the seventh sometimes slightly raised and confluent just before the apex, unicolorous brownish-bronze, sometimes slightly cupreous in tint; beneath shining, dark bronze, rather closely and somewhat coarsely punctured, the ventral segments 1–3 also longitudinally wrinkled, the flanks of the prothorax shallowly strigose; the ventral surface in the male closely and more finely punctured along the middle, the segments 1 and 2 flattened and still more closely punctured and pubescent in the centre, and the last segment also pubescent in the middle; legs blackish-bronze, the tarsi lighter, the tibiæ closely and coarsely punctured, and with the outer apical angles of the anterior pair comparatively strongly produced; prosternum declivous, convexly produced; mesosternum broad, moderately deeply excavate, the raised sides more or less rounded off in front.

Length 11–15 millim.; breadth $4\frac{1}{3}$–7 millim. (♂ ♀.)

Hab. Guatemala, El Tumbador, Cerro Zunil, Volcan de Atitlan (*Champion*).

Numerous examples of both sexes. This species is allied to *T. cupreo-viridis*, but duller; the thorax is not so strongly transverse, less narrowed in front, and not so

evidently sinuate before and behind; the elytra are unicolorous (without indications of greenish stripes or reflections), and have the punctures of the striæ closer together, more regular, and not placed in shallow larger and longer depressions towards the sides, and the outer interstices are without traces of wrinkles. As in *T. cupreo-viridis*, the outer apical angles of the anterior tibiæ are very distinctly produced.

I only met with this insect on the Guatemalan Pacific slope, and at elevations of from 2500 to 4500 feet.

28. Tarpela sinuaticollis.

Oblong ovate, convex, subparallel, bright brownish-bronze, with greenish or cupreous tints, very shining. Head rather closely, somewhat coarsely, and subequally punctured, the vertex smoother, the epistoma short and limited behind by a distinct groove; antennæ rather long, in the male reaching to about one third of the length of the elytra, widening a little towards the apex, the joints 7–10 subtriangular, the apical one distinctly longer than the tenth, reddish-brown; prothorax transverse, rather convex, somewhat strongly margined, the margins narrowly grooved within, the sides a little rounded about the middle, very slightly narrowing and distinctly sinuate behind, and obliquely converging and sinuate in front, the apex broadly but not very deeply emarginate, the anterior angles somewhat produced and narrowly rounded, the base bisinuate, the basal foveæ rather deep, the hind angles subrectangular or obtuse, the disc slightly transversely depressed before the base, the surface rather coarsely, somewhat closely, and subequally punctured, the base and disc sometimes rather more sparingly so, a narrow longitudinal space on the centre of the latter impunctate (sometimes obsolete), greenish-bronze; elytra subparallel to beyond the middle, very little rounded at the shoulders, the latter rather prominent, rather long and convex, moderately deeply striate, the striæ with fine shallow closely-placed elongate impressions on the disc, the impressions becoming rather coarser and deeper outwardly and finer and less distinct towards the apex, the interstices flat throughout and very minutely and sparingly punctured, rather variable in colour—usually bronzy-cupreous, with the suture and lateral margins more or less tinged with green, rarely bronze or green, with the suture cupreous; legs dark bronze, the tarsi lighter; beneath shining, brownish-bronze, finely and very sparingly punctured (including the metasternum), the ventral segments 1–3 also shallowly longitudinally wrinkled, and in the male with a flattened closely punctured pubescent space along the middle, the flanks of the prothorax almost smooth; prosternum closely punctured, subhorizontal, acuminately produced, the apex with a fine raised point; mesosternum declivous, rather narrow, moderately deeply excavate.

Length 5–7⅓ millim.; breadth 2⅓–3½ millim. (♂ ♀.)

Hab. PANAMA, Bugaba and David in Chiriqui (*Champion*).

Eight examples. This insect resembles *Nautes belti*, but has the prosternum differently shaped; the head and thorax more finely punctured; the sides of the thorax obliquely and sinuously converging before the middle and distinctly sinuate and a little narrowing behind, and the base straighter; the under surface very much more finely punctured, &c.; the elytra are sculptured and coloured very much as in that species, though rather more parallel.

29. Tarpela puncticeps.

Oblong ovate, moderately convex, brownish-æneous, shining. Head very coarsely, closely, and subequally punctured, the punctures here and there longitudinally confluent, the epistoma subtruncate in front and limited at the sides by a shallow impression and behind by a very indistinct (sometimes obsolete) groove; antennæ moderately long, about reaching to the middle of the elytra in the male, the apical joint longer and stouter than

the tenth, ferruginous or reddish-brown; prothorax transverse, rather convex, somewhat strongly margined, the margins shallowly but broadly grooved within, the sides feebly sinuate, though scarcely narrowing from a little before the middle to the base, obliquely converging and sinuate and slightly crenulate in front, the apex shallowly emarginate, the anterior angles broadly rounded, the base bisinuate, the basal foveæ deep, the hind angles subrectangular, the disc slightly transversely impressed in the middle just before the base, the surface rather coarsely, somewhat closely, and subequally punctured (much more finely so than the head), and sometimes with a narrow ill-defined smooth longitudinal space on the basal half of the disc; elytra moderately long, subparallel or scarcely widening from the base to the middle, the humeri rather prominent, somewhat deeply striate, the striæ rather coarsely and closely crenate-punctate outwardly and finely punctured on the disc and at the apex, the interstices feebly convex on the disc, more strongly so outwardly, and finely and quite distinctly punctured; legs reddish-brown or ferruginous; beneath reddish-brown, shining, sparingly and finely punctured, the ventral segments 1–3 more distinctly so and also longitudinally wrinkled and similar in both sexes, the flanks of the prothorax very finely strigose; prosternum closely and very coarsely punctured, rather broad, slightly declivous and then horizontally produced, the apex with a distinct raised point; mesosternum declivous, narrow, comparatively deeply excavate.

Length 5–8 millim.; breadth $2\frac{1}{3}$–$3\frac{1}{2}$ millim. (♂ ♀.)

Hab. Guatemala, El Tumbador, Volcan de Atitlan (*Champion*).

Nine examples. This insect is perhaps nearest allied to *T. sinuaticollis*, the thorax being somewhat similarly shaped though more broadly grooved within the lateral margins; it will, however, be readily known from that species by its less parallel form, more coarsely punctured head, rather convex and more distinctly punctured interstices, more coarsely punctured outer striæ, strigose flanks of the thorax, &c. From *Nautes belti* it differs in its smoother under surface, differently shaped and less coarsely punctured thorax, the still more coarsely punctured head, the differently formed pro- and mesosterna, &c.

The coarse close punctuation of the head is a marked character of *T. puncticeps*; the ventral segments 1–3 in the male are not impressed and pubescent in the middle as in the allied species.

30. **Tarpela tropicalis.** (Tab. XIII. fig. 10, ♂.)

Oblong ovate, rather convex, metallic bronzy green, sometimes bluish, shining. Head rather short and convex, somewhat coarsely, moderately closely, and subequally punctured, the epistoma not clearly defined, the usual dividing groove represented at most by a shallow fovea in the middle, the antennary orbits scarcely extended laterally and but little swollen; antennæ stout, moderately long, reaching to about the middle of the elytra in the male, widening a little outwardly, the penultimate joints subtriangular, the apical joint much longer and stouter than the tenth in the male, piceous; prothorax rather broader than long, convex, strongly margined, the margins narrowly grooved within, the sides slightly rounded about the middle, straight or a little sinuous behind, and narrowing and feebly crenulate in front, the apex rather deeply emarginate, the anterior angles produced in front and narrowly rounded, the base rather strongly bisinuate, the basal foveæ very deep, the hind angles subrectangular, the disc rarely with a transverse sinuous impression before the base, the surface rather coarsely and somewhat closely punctured (not quite so closely as the head), the punctures finer and more scattered at the sides and base; elytra rather long, strongly margined, the humeri moderately prominent, very slightly rounded at the sides (almost subparallel), widest about the middle, deeply striate throughout, the striæ somewhat coarsely crenate-punctate towards the sides, much more finely so on the disc and at the apex, a row of coarse irregular impressions on each side within the margins, the interstices a little convex and finely and sparingly punctured; beneath brownish-piceous, shining, almost smooth, the flanks of the prothorax with

rather coarse scattered impressions, the ventral segments 1–3 in the male finely and closely punctured and pubescent along the middle; prosternum rather narrow, slightly grooved between the coxæ, declivous, the apex scarcely raised.

Length 5–7 millim.; breadth 2½–3 millim. (♂ ♀.)

Hab. GUATEMALA, El Jicaro, Tocoy, Rio Maria Linda (*Champion*).

Seven examples. A small metallic bluish-green species somewhat resembling the Cuban *Nautes rufipes*, All., but much smaller and with differently-formed head, prosternum, &c. From *Helops mutabilis*, Waterh., from Jamaica, which it resembles in size and colour. it will be known by the head being more convex and not nearly so distinctly impressed in front, the less prominent anterior angles of the thorax, the more finely punctured elytral striæ, &c.

31. **Tarpela subvittata.** (Tab. XIII. fig. 11 ♀.)

Oblong ovate, subparallel, moderately convex, bright bronze, with greenish and cupreous reflections, shining. Head transversely impressed in front, the epistoma broadly and shallowly emarginate, coarsely and closely punctured, the punctures a little more crowded in the centre of the intraocular space and here and there obliquely or longitudinally confluent; antennæ moderately long, reaching to about one third of the length of the elytra in the male, joints 8–10 narrow, piceous; prothorax transverse, rather convex, strongly margined, the margins grooved within, the sides rounded about the middle, feebly sinuate and scarcely narrowing behind, and obliquely narrowing in front, the anterior angles broadly but not very strongly produced and broadly rounded, the hind angles subrectangular, the base feebly bisinuate and strongly margined, the basal foveæ moderately deep, the disc transversely flattened before the base, the surface closely, moderately coarsely, and subequally punctured, a narrow ill-defined longitudinal space on the basal half of the disc impunctate; scutellum large, subtriangular; elytra long, wider than the prothorax, subparallel, the humeri a little prominent in front, narrowly and regularly striate throughout, the striæ finely and somewhat distantly punctured on the disc, a little more coarsely so towards the sides, the interstices flat on the disc, feebly convex outwardly, and very distinctly, somewhat closely, and comparatively not very finely punctured, the sutural and marginal interspaces and a broad ill-defined oblique stripe from the shoulder (chiefly confined to the third, fourth, and fifth interspaces) to the apex more or less tinged with metallic green; beneath shining, dark bronze, the sides and the last two ventral segments with bluish reflections, sparingly punctured, the ventral segments 1–3 also coarsely longitudinally wrinkled and in the male with a very closely punctured pubescent space along the middle, the metasternum with scattered coarse impressions at the sides; legs dark bronze, the tibiæ coarsely and roughly punctured; prosternum slightly declivous, strongly acuminately produced, the apex a little raised; mesosternum declivous, broad, moderately deeply excavate.

Length 9–10½ millim.; breadth 3¾–4¾ millim. (♂ ♀.)

Hab. GUATEMALA, El Tumbador 2500 feet (*Champion*).

Two examples. This insect somewhat resembles *T. cupreo-viridis*, but is readily distinguished by the punctate-striate elytra and very distinctly punctured interstices, and also by the rougher tibiæ and the differently formed pro- and mesosterna; from *T. puncticeps* it is separated by its larger size, longer and more parallel elytra, more distinctly punctured interstices, rougher tibiæ, shorter antennæ, more coarsely punctured metasternum, and other characters.

T. subvittata is one of several allied species found by myself in the same locality on the Guatemalan Pacific slope. These insects were all captured in the vicinity of the

coffee-plantations of the district of El Tumbador, in the department of San Marcos, and on the margins of the forest.

32. **Tarpela depressa.** (Tab. XIII. fig. 12, ♂.)

Oblong ovate, subparallel, depressed, brownish-piceous, with a very slight bronzy tint, shining. Head short, shallowly transversely impressed in front, the impression widening out into a deepish fovea on each side, rather finely and somewhat sparingly punctured; antennæ rather stout, widening a little outwardly, about reaching to one third of the length of the elytra (in the male), joints 8–10 subtriangular, the apical joint longer than the tenth, dark ferruginous; prothorax broad, transverse, very strongly margined, the margins slightly expanded and narrowly grooved within, the sides a little rounded, narrowing in front, and very slightly narrowing and sinuate (almost straight) behind, the anterior angles broadly and rather strongly produced and rounded, the apex broadly but not very deeply emarginate, the hind angles subrectangular, the base bisinuate and strongly margined, the basal foveæ deep, the disc broadly and shallowly transversely impressed behind, the surface finely, equally, and sparingly punctured; elytra very little wider than the prothorax, strongly margined, subparallel, rather long, the humeri a little prominent in front, deeply striate throughout, the striæ very finely and shallowly punctured, the interstices feebly convex and very minutely and sparingly punctured; legs dark ferruginous, the tibiæ rather closely punctured; beneath very sparingly and finely punctured, the flanks of the prothorax almost smooth; ventral segments 1–3 in the male broadly flattened and concave in the middle, the space enclosed exceedingly closely and minutely punctured and pubescent; prosternum smooth, a little declivous, subacuminately and convexly produced, the apex armed with a small rounded prominence; mesosternum declivous, moderately excavate.

Length $8\frac{1}{2}$ millim.; breadth $3\frac{1}{2}$ millim. (♂.)

Hab. Mexico, Yucatan (*coll. Oberthür*).

One example. This species is remarkable on account of its flattened subparallel form; broad, strongly margined, and finely punctured thorax; deep and finely punctured elytral striæ; comparatively smooth under surface; and male characters.

The unique example has been kindly lent me by M. Réné Oberthür; it is labelled "*Helops depressus*, Pilate."

33. **Tarpela crassipes.** (Tab. XIII. fig. 13, ♂.)

Oblong ovate, subparallel, rather convex, dark bronze, with greenish and cupreous tints, moderately shining. Head coarsely and moderately closely punctured, the punctures here and there longitudinally confluent, the epistoma broadly but feebly emarginate in front and limited behind by a very shallow groove; antennæ rather stout, comparatively short, piceous; prothorax broad, transverse, rather convex, the reflexed lateral margins prominent and narrowly grooved within, the sides somewhat rounded, slightly narrowing and very feebly sinuate behind and more distinctly narrowing in front, the apex somewhat deeply emarginate, the anterior angles produced in front and rather broadly rounded, the base strongly bisinuate, the basal foveæ rather shallow, the disc a little raised anteriorly, the hind angles somewhat obtuse, the surface rather coarsely, distantly, and very unequally punctured, the sides and base distinctly suffused with metallic green; elytra moderately long, subparallel, a little flattened on the disc, the humeri rounded but a little prominent in front, with rows of coarse rounded rather distantly placed impressions, the impressions still coarser and here and there confluent towards the sides, the interstices flat and sparingly but distinctly punctured, bronzy-cupreous, each with three ill-defined longitudinal metallic greenish stripes from the base to the apex; legs rather short, stout (the tarsi especially), coarsely punctured; beneath brownish-piceous, more shining, sparingly but rather coarsely punctured, the flanks of the prothorax shallowly strigose; prosternum declivous and rounded off behind; mesosternum broad, declivous, rather deeply excavate.

Length $7\frac{2}{3}$ millim.; breadth $3\frac{2}{3}$ millim. (♂.)

Hab. MEXICO, La Parada (*Sallé*).

One example. This species may be known by its subparallel and rather convex form; the thorax broad and strongly margined; the elytra with rows of coarse rounded impressions and ill-defined metallic green and cupreous stripes (coloured and sculptured much as in *Helops sumptuosus*); the stout legs, the tarsi especially stout and with the three basal joints dilated in the male, &c. I provisionally include *T. crassipes* in this genus; it cannot be satisfactorily compared with any of the other species here recorded.

** *Anterior tarsi with the three basal joints narrower, narrowing outwardly and slightly or not at all wider in the male.*

34. Tarpela ærifera.

Tarpela ærifera, Allard, Rév. Hélopides, L'Abeille, xiv. p. 7 & 47[1]; Mittheil. der schweiz. ent. Ges. v. pp. 57 & 239[2].

Hab. MEXICO (*coll. Chevrolat*[1 2], *Sallé*, *Oberthür*), Jalapa, Matamoros Izucar (*Höge*); PANAMA, Volcan de Chiriqui (*Champion*).

Numerous examples of both sexes of an insect collected by Herr Höge agree fairly well with the description of this species. These specimens vary in length from $7\frac{1}{2}$–$12\frac{1}{2}$ millim. and in breadth from 3–6 millim. The thorax varies in shape, the sides in some examples being angulate or crenulate, in others almost rounded; it also varies considerably in the intensity of the punctuation—sometimes fine and scattered (as described by Allard), sometimes coarser and closer.

T. ærifera will be known by its bright bronzy colour; the strongly margined thorax, the margins a little extended and broadly grooved within; the elytra long and subparallel, with rows of more or less coarse elongate impressions, the interstices flat and distinctly punctured. The single example (female) from the State of Panama differs from those from Mexico in having the anterior angles of the thorax slightly deflexed; but I do not think it represents more than a variety of *T. ærifera*.

35. Tarpela allardi. (Tab. XIII. fig. 14.)

Elongate ovate, moderately convex, subparallel, dark bronze, with a slight cupreous or golden tint, slightly shining. Head rather long, shallowly transversely impressed in front, closely and moderately coarsely punctured; prothorax transversely subquadrate, rather depressed, somewhat broadly expanded at the sides, if anything widest before the middle, strongly margined, the margins broadly and shallowly grooved within, the sides very feebly crenulate, a little narrowed in front and almost straight behind, the anterior angles broadly but not strongly produced and broadly rounded, the apex feebly emarginate, the hind angles subrectangular, the base rather feebly bisinuate, the basal foveæ small but deep, the disc with a long sinuous transverse impression some distance before the base, the surface finely, shallowly, and sparingly punctured; elytra comparatively very long, feebly convex, wider than the prothorax, subparallel, the humeri a little prominent in front, with rows of rather coarse more or less longitudinal distantly placed impressions, the impressions towards the sides and apex deeper and there placed in shallow oblong foveæ, which are often more or less metallic golden-cupreous within, the interstices flat on the disc, somewhat

irregular towards the sides, and shallowly, rather closely, and very distinctly punctured; beneath more shining, blackish-bronze, shallowly, sparingly, and finely punctured, the ventral segments 1–3 also longitudinally wrinkled, the flanks of the prothorax irregularly strigose and with some scattered punctures; legs sparingly punctured; prosternum subdeclivous, the apex produced into a short conical tubercle; mesosternum rather deeply excavate.

Length 14½–15 millim.; breadth 6 millim. (♀.)

Hab. Mexico (*coll. Oberthür*), Misantla (*Höge*).

Two female examples. This insect is closely allied to *T. ærifera*; it will be known by its less shining surface, larger size, and relatively longer elytra, and also by the thorax being less narrowed in front and transversely subquadrate in shape, and more finely and shallowly punctured. The example kindly lent me by M. Réné Oberthür differs only from the other from Misantla in being of a lighter and more golden tint.

36. **Tarpela amabilis.** (Tab. XIII. fig. 15, ♀.)

Oblong ovate, rather convex, metallic bronzy-green, shining. Head short, coarsely, closely, and subequally punctured, the punctures more or less longitudinally confluent, the epistoma short and limited behind by a very shallow groove, the intraocular space (in one example) with a shallow fovea in the middle; antennæ long, reaching to the middle of the elytra in the male, joints 9 and 10 long and subtriangular, piceous; prothorax subquadrate, rather broader than long, widest at or a little before the middle, comparatively strongly margined, the margins narrowly grooved within, the sides very slightly narrowed and sinuate behind the middle and slightly narrowing and feebly crenulate in front, the anterior angles a little prominent and narrowly rounded, the apex shallowly emarginate, the base very feebly bisinuate (almost straight), the basal foveæ shallow, the hind angles subrectangular, the disc impressed in the middle just before the base, the surface closely and somewhat coarsely punctured (more finely so than the head), the punctures here and there longitudinally confluent on the disc and more scattered at the sides and base, a narrow ill-defined longitudinal space on the posterior third of the disc impunctate; elytra considerably broader than the prothorax (especially in the female), a little flattened on the disc, rather long, subparallel in the male, very slightly widening from the base and widest a little beyond the middle in the female, strongly margined, the humeri rounded and very slightly produced in front, deeply striate, the striæ somewhat finely, shallowly, and not very closely punctured (the punctures longitudinal in form) on the disc, more coarsely so outwardly, a row of coarse irregular impressions on each side within the lateral margins, the interstices flat or feebly convex, very minutely and distantly punctured, with traces of shallow transverse wrinkles (in one example) and each with a row of small distantly placed smooth conical elevations, the elevations almost obsolete from the basal half of the disc and most prominent at the apex and towards the sides, the suture, sides, and apical third more or less bronze in tint; beneath dark reddish-brown, shining, the metasternum very finely and very sparingly, the ventral segments much more distinctly, punctured, the latter also longitudinally wrinkled, the ventral segments 1–3 in the male closely and finely punctured and pubescent along the middle, the flanks of the prothorax finely and closely strigose; prosternum coarsely punctured, declivous, the apex not raised; mesosternum narrow, declivous, very feebly excavate; legs rather long, the tibiæ coarsely roughened and punctured, the femora very much smoother and only punctured at the apex.

Length 5⅔–8¼ millim.; breadth 2⅓–4 millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo (*Champion*).

Two examples. This species will be readily known by the rows of small distantly-placed smooth conical elevations on each interstice at the apex and sides of the elytra.

37. **Tarpela silvicola.** (Tab. XIII. fig. 16, ♂.)

Oblong ovate, rather convex, subparallel, very shining, metallic greenish-bronze, with green or cupreous reflections. Head broad, shallowly transversely impressed in front, somewhat coarsely and rather closely punctured, the punctures here and there confluent on each side before the eyes, the intraocular space and the vertex smoother, the epistoma truncate in front; antennæ long, about reaching to the middle of the elytra in the male, joints 8–10 long and subtriangular though scarcely wider than those preceding, the apical joint one third longer than the tenth, dark reddish-ferruginous; prothorax transverse, rather convex, strongly margined, the margins somewhat broadly grooved within, the sides a little rounded about the middle, slightly narrowing and sinuate before the prominent subrectangular hind angles, and obliquely converging in front, the apex broadly but not deeply emarginate, the anterior angles broadly rounded, the base rather strongly bisinuate and very distinctly margined, the basal foveæ shallow, the disc with a long shallow transverse sinuous depression just before the base, the surface moderately finely, diffusely, and subequally punctured (much more finely so than the head), the sides and a central line on the disc often suffused with golden-cupreous; elytra long, subparallel, rather convex, finely and lightly striate, the striæ with fine rather distantly placed elongate impressions, the impressions rather coarser and deeper towards the sides, the interstices flat and almost impunctate, a narrow oblique stripe from the shoulder to the apex and sometimes one or two of the outer interstices more or less suffused with golden-cupreous; legs dark brownish-bronze, the tarsi lighter, the tibiæ rather closely punctured; anterior tarsi in the male with the three basal joints a little dilated but decreasing in width outwardly, the fourth joint rather long; beneath greenish-bronze, shining, very sparingly and finely punctured, the ventral segments 1–3 more closely punctured in the middle, longitudinally wrinkled, and similar in both sexes, the flanks of the prothorax finely strigose; prosternum subhorizontal, subparallel, broadly and strongly produced, rather coarsely punctured at the sides; mesosternum declivous, rather deeply excavate.

Length 8–11¼ millim.; breadth 4½–5⅓ millim. (♂ ♀.)

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet (*Champion*).

Many examples. This species somewhat resembles *T. cupreo-viridis*; it differs in having the upper surface much more shining; the elytra finely striate and more finely punctured, and with the interstices flatter; the prosternum broader, &c. From *Nautes tinctus* it is separated by its narrower form, longer and differently shaped thorax, more coarsely punctured head, differently shaped mesosternum, &c. In the male of *T. silvicola* the anterior tarsi, though a little dilated, have the three basal joints decreasing in width outwardly; and the ventral surface similar in both sexes.

38. **Tarpela fragilicornis.** (Tab. XIII. fig. 17, ♂.)

Oblong ovate, subparallel, depressed, bright greenish-bronze. Head short, strongly transversely impressed in front, moderately coarsely and somewhat closely punctured; antennæ long and slender, reaching beyond the middle of the elytra (in the male), the joints comparatively very long, the apical one about one half as long again as the tenth, and slightly curved, fusco-ferruginous; prothorax broad, transverse, a little expanded at the sides, the lateral margins thin and not reflexed and rather broadly grooved within, the sides rounded, widest in the middle, and almost equally narrowing before and behind (very little narrower at the apex than at the base), the anterior angles rounded and not prominent, the apex broadly and feebly emarginate, the hind angles very obtuse and almost rounded, the base feebly bisinuate but straight in the middle, the basal foveæ very shallow, the disc flattened behind and shallowly impressed in the middle before the base, the surface finely and sparingly punctured, the punctures rather coarser at the sides and base; scutellum broad, transverse: elytra long, subparallel, strongly margined, the humeri broadly rounded but a little prominent in front, finely and lightly punctate-striate, the punctures closely placed, a little coarser outwardly, and finer and shallower behind, the interstices quite flat and very minutely punctured; legs, including the tarsi, very long and slender, the tibiæ rather sparingly punctured, the femora much smoother; beneath not very shining, comparatively smooth, the ventral surface very shallowly and finely

longitudinally wrinkled and minutely punctured in the middle, the sides of the metasternum and side-pieces with scattered shallow coarsish impressions, the flanks of the prothorax very finely and shallowly strigose; prosternum strongly declivous, the apex unarmed; mesosternum declivous, feebly excavate.

Length 10 millim.; breadth 4 millim. (♂.)

Hab. MEXICO, Juquila (*Sallé*).

One example. This species is remarkable on account of the very long and slender legs and antennæ (the latter with very long apical joint, in the male), the expanded sides of the thorax, the closely punctured fine elytral striæ, subparallel depressed form, &c.; it approaches *T. silvicola*.

39. **Tarpela suturalis.**

Oblong ovate, rather convex, subparallel, very shining, colour variable—more or less metallic bronze-green, with cupreous and golden reflections. Head broad, somewhat coarsely and not very closely punctured, the vertex smoother, bronzy-green, the anterior half and the intraocular space golden, the epistoma rather long, truncate in front, and limited behind by a very shallow groove; antennæ long, reaching to the middle of the elytra in the male, joints 8–10 long and narrow, ferruginous; prothorax strongly transverse, rather convex, strongly margined, the margins a little expanded and somewhat broadly grooved within, the sides rounded at the middle, narrowing and rather strongly sinuate behind, and obliquely converging in front, the apex rather deeply emarginate, the anterior angles broadly rounded and prominent, the base bisinuate and very distinctly margined, the basal foveæ shallow, the hind angles subrectangular, the disc with a shallow transverse sinuous impression before the base, the surface sparingly and finely punctured (in one example much smoother), colour—in one example golden-green, with the sides and a narrow longitudinal space on the disc cupreous, in the other light bronzy-cupreous, with a narrow line on the disc, and the base and apex more or less tinged with golden or green; elytra moderately long, rather convex, subparallel, rather deeply punctate-striate, the punctures elongate and distantly placed towards the sides, and finer and shallower on the disc and at the apex, the interstices slightly convex, flatter on the disc, and almost impunctate, colour metallic green, the sides, the base narrowly, the suture, and a narrow oblique stripe from the shoulder to the apex, golden-cupreous; legs dark ferruginous, the femora darker; anterior tarsi in the male with the three basal joints a little dilated, but distinctly decreasing in width outwardly; beneath brownish-bronze, with a slight golden tint, shining, very sparingly and finely punctured, the ventral segments 1–3 much more distinctly so, and also longitudinally wrinkled, and similar in both sexes, the flanks of the prothorax rather coarsely strigose; prosternum declivous, the apex produced and a little raised; mesosternum moderately excavate.

Length 9 millim.; breadth 4–4⅓ millim. (♂ ♀.)

Hab. GUATEMALA, El Tumbador (*Champion*).

Two examples. This insect is allied to *T. silvicola*; the thorax, however, is broader, and more distinctly sinuate at the sides behind the middle; the elytra shorter, less parallel, more deeply striate, the striæ more coarsely punctured towards the sides, the interstices slightly convex; the prosternum differently formed, &c. In the structure of the anterior tarsi, and the sculpture of the ventral surface, the male agrees with the same sex of *T. silvicola*.

40. **Tarpela cisteliformis.** (Tab. XIII. fig. 18, ♂.)

Tarpela cisteliformis, Allard, Mittheil. der schweiz. ent. Ges. v. pp. 57 & 241[1].

Hab. MEXICO (*coll. Haag*[1]); GUATEMALA, Capetillo (*Champion*).

Five examples, four males and one female, of an insect collected by myself at Capetillo are apparently referable to this species. No mention is made by Allard of the structure of the antennæ, and the specimen described is presumably a female. The Guatemalan insect, however, agrees so nearly with Allard's description of *T. cisteliformis* in its general characters, that I have little doubt it belongs to that species. I give a fresh description from Guatemalan specimens:—

Oblong ovate, subparallel, depressed, bright metallic bronze, with slight greenish and cupreous tints. Head short, very deeply transversely impressed in front, rather coarsely and somewhat densely punctured; antennæ in the male moderately stout, very long, reaching to the middle of the elytra, the third joint nearly twice as long as the fourth, the ninth and tenth joints shorter than the eighth and equal, and the apical joint curved, and more than twice as long as the tenth, in the female shorter and more slender, and the apical joint not very much longer than the tenth, fusco-ferruginous or piceous; prothorax short, strongly transverse, narrowly margined, the sides a little rounded about the middle, narrowing and feebly sinuate in front, and feebly sinuate and almost straight behind, the anterior angles rounded and not very prominent, the apex feebly emarginate (truncate when viewed from above), the hind angles subrectangular, the base feebly bisinuate, somewhat produced in the middle, the basal foveæ distinctly impressed, the disc broadly transversely impressed before the base, the sides punctured like the head, the disc very much more sparingly and finely so, a more or less distinct rounded impression on each side about the middle just within the lateral margin; elytra much wider than the prothorax, subparallel, long, a little constricted at the sides before the apex, the humeri rounded and a little prominent in front, with rows of fine, shallow, closely placed punctures, the punctures still finer and almost obsolete towards the apex, and coarser and more scattered and more elongate in form towards the sides, the apical margin impressed on each side within, the interstices quite flat and very minutely and sparingly punctured, the second and eighth carinate just before the apex, the suture and striæ often tinted with cupreous; legs long and slender, sparingly punctured, dark bronze; beneath shining, greenish-bronze, the ventral surface very finely and sparingly punctured and shallowly and irregularly wrinkled, and similarly sculptured in both sexes; metasternum long, smooth, the sides narrowly and more or less distinctly, and the side-pieces shallowly and somewhat coarsely, punctured; flanks of the prothorax coarsely and closely punctured; prosternum almost smooth, very slightly declivous, convexly and acuminately produced; mesosternum moderately deeply excavate.

Length 10½–12 millim.; breadth 4–4¾ millim. (♂ ♀.)

This distinct species bears a certain resemblance to the North-American *Helops* (*Lamperos*) *micans*, Fabr.; it will be known by the long and curved apical joint of the antennæ in the male (suggestive of the genus *Statira*), the short head and thorax, depressed form, and other characters noted above. *T. cisteliformis* and the following species may possibly form the types of a new genus.

41. **Tarpela totonicapamensis.** (Tab. XIII. fig. 19, ♀.)

Resembling *T. cisteliformis*, and differing as follows:—Narrower and more elongate; the head more finely, more sparingly, and more irregularly punctured, broadly transversely impressed in front, a U-shaped shallow impression between the eyes; the antennæ more slender, the apical joint (in the female) one third longer than the tenth, piceous: the prothorax narrower, almost as broad in front as at the base, the sides more constricted and more strongly sinuate behind the middle, and a little rounded anteriorly, the anterior angles more deflexed and broadly rounded, the hind angles more prominent and directed outwards, the transverse depression on the disc behind very deeply impressed laterally, the surface much more finely and sparingly punctured; the elytra narrower, relatively very much longer, the punctures finer and shallower and not so closely placed, and still finer and almost obsolete beyond the middle, the interstices quite flat, impunctate, and the second carinate just before the apex, the apex impressed on each side

within; the legs longer and more slender; beneath smoother, the side-pieces of the metasternum more finely punctured, the flanks of the prothorax very finely and shallowly wrinkled within and smooth without; the prosternum rounded off and declivous behind, the apex unarmed; the mesosternum feebly excavate.

Length 12 millim. (of the elytra 9 millim.); breadth 4½ millim. (♀.)

Hab. GUATEMALA, Totonicapam 10,000 feet (*Champion*).

One example only of this exceedingly distinct species was obtained.

42. **Tarpela docilis.** (Tab. XIII. fig. 20.)

Oblong ovate, narrow, rather convex, subparallel, dark bronze, shining. Head short, coarsely, irregularly, and somewhat closely punctured, rather deeply transversely impressed in front; antennæ rather short, the penultimate joints widening a little outwardly, the apical joint in the male rather longer than the tenth; prothorax narrow, broader than long, strongly but narrowly margined, widest at the base, the sides a little sinuous but not narrowing behind, and slightly narrowing and rounded in front, the anterior angles broadly rounded and not prominent, and a little deflexed, the apex almost straight, the hind angles rectangular, the base feebly bisinuate and a little produced in the middle, the basal foveæ moderately deep, a rather deep (or shallow) sinuous transverse impression on the disc before the base, and a shallow rounded impression on each side near the middle of the lateral margin, the surface coarsely and closely punctured, the punctures more scattered at the sides and base; elytra wider than the prothorax, long, subparallel to far beyond the middle, the humeri rounded but a little prominent in front, with rows of shallow rather distantly placed rounded or oblong impressions, the impressions towards the sides placed in very shallow larger excavations, and becoming much finer towards the apex, the interstices flat and finely and sparingly punctured; legs rather short, the tibiæ somewhat closely punctured, the femora almost smooth; beneath shining, very shallowly, finely, and sparingly punctured, the metasternum with a few coarse scattered punctures at the sides, the flanks of the prothorax coarsely punctured, the ventral segments similarly sculptured, and the apical one hairy in the middle, in both sexes; prosternum strongly declivous behind, the apex unarmed; mesosternum declivous, very feebly excavate.

Length 7½ millim.; breadth 3–3½ millim. (♂ ♀.)

Hab. MEXICO, Jalapa (*Höge*), Cordova (*Sallé*).

Two examples, apparently male and female. This species is not very nearly allied to any other noticed here; it perhaps comes nearest to *T. cisteliformis*, from which it is separated by its smaller size, shorter antennæ and legs, more parallel form, closely punctured and less transverse thorax (the anterior angles of which are broadly rounded), declivous prosternum, &c. The immature specimen (female) from Cordova has the head and thorax less coarsely punctured, the basal impression on the disc of the latter much shallower, and punctures of the elytral series more closely placed.

HELOPS.

Helops, Fabricius, Syst. Ent. p. 257 (1775); Lacordaire, Gen. Col. v. p. 450 (1859); Horn, Rev. Ten. of Am. north of Mexico, p. 391 (1870) (pars); Trans. Am. Ent. Soc. viii. p. 152 (1880) (pars) (nec Allard).

Coscinopter, Allard, Rév. Hélopides, L'Abeille, xiv. p. 4 (1876) (nomen præoc.).

Coscinoptilix, Allard, Mittheil. der schweiz. ent. Ges. v. pp. 16, 33, & 127 (1880).

Stenomax, Allard, Rév. Hélopides, L'Abeille, xiv. p. 4; Mittheil. der schweiz. ent. Ges. v. pp. 17, 33, & 130.

Diastixus, Allard, Rév. Hélopides, L'Abeille, xiv. p. 5; Mittheil. der schweiz. ent. Ges. v. pp. 17, 43, & 174*.

For the purposes of this work I retain the genus *Helops* solely for certain apterous species, most of which belong to *Coscinoptilix*, *Stenomax*, or *Diastixus* as defined by Allard. I do not feel justified in adopting any of these generic names for the Central-American species. To do so it would be necessary to make others, not only in *Helops*, but in *Tarpela* and *Nautes*, and this, in the present state of our knowledge of the "Helopides" of tropical South America (a single species only of the group has been described as yet, *Nautes ovatus*, F. Bates, from Colombia), I am not prepared to do. In Allard's 'Révision' no mention is made of the presence or absence of wings, the presence of which often denotes more prominent humeri, a longer metasternum, and a longer scutellum.

a. *Epipleuræ narrowly extending to the apex of the elytra.*

1. Helops gracilicornis. (Tab. XIII. fig. 21, ♀.)

Coscinopter gracilicornis, Allard, Rév. Hélopides, L'Abeille, xiv. pp. 15, 52[1].
Coscinoptilix gracilicornis, Allard, Mittheil. der schweiz. ent. Ges. v. pp. 33, 127[2].

Hab. Mexico[2] (*colls. Oberthür, F. Bates, Mus. Brit.*), Orizaba (*mus. Belg.*[1]), Jacale (*Sallé*).

2. Helops cavifrons. (Tab. XIII. fig. 22, ♀.)

Elongate ovate, moderately convex, metallic bronze, the prothorax more shining and of a greenish-golden tint. Head very sparingly and finely punctured, the epistoma truncate in front and limited behind by a deep, broad, transverse furrow; antennæ (female) rather long and slender, joints 9 and 10 subequal, and scarcely widening outwardly, the apical joint longer than the tenth, ferruginous; prothorax rather narrow, as long as broad, moderately longitudinally convex, widest before the middle, very finely and narrowly margined, the sides feebly sinuate, and very slightly narrowing behind and scarcely narrowing in front, the apex straight (when viewed from above), the anterior angles rounded and deflexed, the base broadly truncate in the middle and rather obliquely cut off at the sides, the basal foveæ deep, a shallow transverse impression just within the basal margin in the middle, the hind angles rather obtuse, the surface sparingly and finely punctured, the punctures a little coarser and closer at the sides; elytra long, widest beyond the middle, slightly rounded at the sides, obliquely narrowing at the shoulders, the latter rounded, the base truncate, with rows of shallow, irregular, distantly placed, rounded or elongate impressions, the impressions fine on the disc, and shallower and still finer at the sides and apex, the interstices flat and almost impunctate, the apices a little produced, impressed within, and separately rounded; legs slender, ferruginous; beneath slightly shining, brownish-æneous, very shallowly and finely wrinkled, and indistinctly punctured, the flanks of the prothorax almost smooth; prosternum strongly declivous.

Length 13¼ millim.; breadth 5 millim. (♀.)

Hab. Guatemala, Totonicapam 10,000 feet (*Champion*).

This species is allied to *H. gracilicornis*, but differs in having the head smoother; the thorax longer and narrower, more parallel-sided, very much more finely and

* The synonymy referring to the New-World species only is quoted.

sparingly punctured, and very shining; and the elytra have rows of much finer and shallower impressions.

The unique example before me is somewhat immature.

3. **Helops longicornis.**

Elongate ovate, moderately convex, brownish-bronze, rather shining. Head closely, unequally, and somewhat coarsely punctured, the intraocular space with coarser and longitudinally confluent impressions, the epistoma truncate in front and limited behind by a rather deep transverse groove; antennæ very long, passing the middle of the elytra in the male, joints 9 and 10 scarcely wider than the preceding, the apical joint in the male much longer than the tenth, and slightly curved, brownish-piceous; prothorax nearly as long as broad in the male, transverse in the female, moderately convex, very feebly margined, the sides slightly rounded about the middle, obliquely but not strongly narrowing from a little before the middle to the base, and very feebly sinuate and about equally narrowing in front, the apex straight (when viewed from above), the anterior angles rounded and rather deflexed, the base almost straight, the basal foveæ very shallow, the hind angles rather obtuse, the surface closely, rather coarsely, and somewhat unequally punctured, the punctures rather more scattered on the disc, and closer, and here and there confluent towards the sides; elytra long, somewhat depressed, gradually widening to some distance beyond the middle, the base subtruncate, the humeri scarcely prominent, narrowly striate, the striæ closely and somewhat coarsely punctured, the interstices a little convex, and finely, shallowly, and sparingly punctured; legs brownish-piceous, the tarsi ferruginous, the anterior tarsi a little dilated in the male; beneath brownish-piceous, the coxæ reddish-ferruginous, slightly shining, coarsely (the flanks of the prothorax still more coarsely and subconfluently) punctured; the ventral surface very much smoother, and finely and shallowly punctured and wrinkled, the last ventral segment hairy in the middle in both sexes, the segments 1–3 in the male more finely and closely punctured along the centre; prosternum strongly declivous; mesosternum simple.

Length 10–11 millim.; breadth 4–4⅓ millim. (♂ ♀.)

Hab. Mexico, Ciudad in Durango 8100 feet (*Forrer*).

Three examples. This insect is allied to the North-American *H. cisteloides*, Germ. (placed by Allard in his genus *Coscinoptilix*), but less convex, the head differently sculptured, the elytra punctate-striate, the prosternum more strongly declivous, the femora beneath and the last ventral segment not so thickly clothed with hair, &c. In one of the examples before me the elytral interstices are almost flat, in the other two convex.

4. **Helops exsculptus.** (Tab. XIII. fig. 23, ♂.)

Elongate ovate, moderately convex, dark brownish-bronze, usually very slightly tinged with green or cupreous, slightly shining. Head closely, coarsely, and irregularly punctured, the epistoma broadly but feebly emarginate in front and limited behind by a shallow or rather deep transverse impression; antennæ rather long and stout, the apical joint in the male longer than the tenth; prothorax rather longer than broad, not very convex, narrowly but very distinctly margined, widest anteriorly, the sides slightly narrowed and sinuous behind the middle and sometimes sinuous before the apex, the apex almost straight (if viewed from above), the anterior angles rounded but rather prominent, the base subtruncate, the basal foveæ rather deep, the hind angles subrectangular, the disc raised in the middle in front, shallowly transversely impressed before the base, and often with indications of a fine shallow central groove, the surface closely and somewhat coarsely punctured, the punctures a little more scattered on the disc, but closer and here and there subconfluent at the sides; elytra long, rather wider than the prothorax, a little flattened on the disc, but subvertical at the sides from the seventh interstice, subtruncate at the base, the sides straight in front and widening and a little rounded beyond the middle, the humeri rather prominent,

with rows of more or less coarse, distantly placed, longitudinal, irregular impressions, the impressions becoming coarser and here and there confluent outwardly and more widely separate towards the apex, the interstices almost flat on the disc, a little convex and irregularly wrinkled and here and there transversely confluent outwardly, shallowly but very distinctly punctured, the seventh more or less distinctly (rarely obsoletely) costate from the shoulder nearly to the apex and there confluent with the slightly raised third, the fifth also slightly costate; beneath dark reddish-brown, a little shining, pubescent, somewhat closely and rather coarsely punctured and wrinkled, the flanks of the prothorax rather coarsely confluently punctured; prosternum smooth, declivous; legs and antennæ reddish-brown or piceous, the basal joint of the anterior tarsi broader in the male.

Length $7\frac{1}{2}$–$13\frac{1}{2}$ millim.; breadth 3–5 millim. (♂ ♀.)

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*), Volcan de Acatenango 10,000 to 12,000 feet (*Sarg*).

This species will readily be known from *H. rugiceps* by the thorax being wider towards the apex, and with the disc raised in the middle in front and the anterior angles more prominent; the elytra flatter on the disc, and with the seventh interstice (and the third and fifth also posteriorly) costate, &c.

I met with this insect in numbers beneath loose pine-bark on the summit of the cordillera above Totonicapam; Mr. Sarg's specimens were obtained at a similar lofty elevation on the Volcan de Acatenango, one of the peaks of the Volcan de Fuego.

5. **Helops rugiceps.** (Tab. XIII. fig. 24, ♂.)

Elongate ovate, rather convex, brownish-piceous, the sides of the prothorax anteriorly and the base and suture of the elytra suffused with reddish-brown, slightly shining. Head coarsely, equally, and confluently punctured, very broadly and shallowly transversely impressed in front, the intraocular space slightly flattened, the epistoma shallowly arcuate emarginate in front; antennæ (male) long, comparatively stout, joints 9 and 10 subtriangular, the apical joint longer than the tenth, ferruginous; prothorax narrow, longer than broad, feebly convex, rather strongly margined, widest before the middle, the sides slightly narrowed and sinuous behind and very little narrowed in front, the apex feebly bisinuate (almost straight if viewed from above), the anterior angles rather broadly rounded and a little prominent, the base subtruncate, the basal foveæ shallow, the hind angles acute, the surface closely, somewhat coarsely, and equally punctured, a narrow longitudinal space on the disc impunctate; elytra long, narrow, slightly flattened on the disc, the humeri a little produced in front, with rows of rounded or elongate rather coarse impressions, the impressions here and there confluent though scarcely becoming coarser outwardly and finer and shallower at the apex, the interstices feebly convex outwardly and very distinctly and comparatively coarsely punctured; legs long, brownish-ferruginous; tarsi stout, the three basal joints of the anterior pair about equal in width in the male; beneath reddish-brown, rather shining, closely, finely, and subequally punctured, the flanks of the prothorax more coarsely and confluently so; prosternum declivous, the apex with a small raised point.

Length $10\frac{1}{2}$ millim.; breadth $3\frac{2}{3}$ millim. (♂.)

Hab. GUATEMALA, Capetillo (*Champion*).

One example. A long and narrow insect somewhat resembling the Californian *H. angustus*, Lec. (a winged species placed by Allard in his subgenus *Omaleis*); it cannot, however, be satisfactorily compared therewith.

b. *Epipleuræ abbreviated at the last ventral suture.*

6. Helops inanis.

Tarpela inanis, Allard, Mittheil. der schweiz. ent. Ges. v. p. 262[1].

Hab. Mexico (*colls. F. Bates and Haag*[1]).

Two examples (male and female) of this species are contained in Mr. F. Bates's collection; one of these is labelled as having been found by Mr. Flohr near the city of Mexico.

7. Helops funebris.

Elongate ovate, moderately convex, brownish-piceous, rather dull. Head broad, closely and somewhat coarsely, the intraocular space more sparingly and more irregularly, punctured, the epistoma long, broadly and but feebly emarginate in front, and limited behind by a very shallow groove; antennæ (female) rather short and stout; prothorax broad, transverse, strongly margined, the margins thickened, the sides slightly rounded, almost equally narrowed at the base and apex, and distinctly sinuate immediately before the base, the apex feebly emarginate (almost straight if viewed from above), the anterior angles broadly rounded, the base very broadly produced in the middle (the central portion passing the hind angles) and feebly sinuate on each side externally, the basal foveæ rather deep, the hind angles obliquely cut off behind and slightly prominent, the disc with a strong transverse sinuous impression before the base, the surface closely and somewhat coarsely punctured; scutellum transverse, broad; elytra long, rather broad, not very convex, flattened on the disc, gradually widening from the base to considerably beyond the middle, rather strongly margined, the humeri rounded, with rows of fine, shallow, distantly placed, elongate impressions, the impressions still finer and shallower towards the apex, the interstices perfectly flat throughout, sparingly though very distinctly punctured, and with traces of fine obsolete transverse wrinkles on the disc; beneath more shining, dark reddish-brown, somewhat coarsely punctured, the flanks of the prothorax very coarsely wrinkled and punctured, the ventral surface also strongly longitudinally wrinkled; prosternum gradually declivous, convexly produced, the apex armed with a smooth rounded prominence; mesosternum broad, very broadly but shallowly excavate; legs stout, the femora and tibiæ coarsely punctured.

Length $13\frac{1}{2}$ millim.; breadth $5\frac{2}{3}$ millim. (♀.)

Hab. Mexico, Puebla (*Sallé*).

One example. Allied to *H. inanis*, but broader, the thorax strongly transverse (about as long as broad in *H. inanis*), the scutellum larger and broader, the legs stouter, and the femora, tibiæ, and under surface more coarsely punctured; the elytra sculptured much as in that species.

8. Helops punctato-striatus.

Oblong ovate, moderately convex, rather broad, bronze-black, rather dull. Head closely, coarsely, and very unequally punctured, the intraocular space with much coarser impressions (the impressions very irregular and here and there longitudinally confluent) and somewhat flattened, the epistoma long, shallowly emarginate in front, and limited behind by a broad and deep transverse groove, the eyes small; prothorax large, transverse, comparatively very broad, moderately convex (more strongly so in front), narrowly margined (the margins not impressed within), the sides broadly but very feebly sinuate emarginate just before the middle, thence to the apex rounded and slightly narrowing, and obliquely narrowing behind, the apex almost straight (if viewed from above), the anterior angles deflexed and very broadly rounded, the base almost truncate, the hind angles obtuse, the basal foveæ obsolete, the surface very closely and

coarsely punctured, the punctures rather more scattered on the disc; scutellum very broad, transverse; elytra broad, a little flattened on the disc, the width of the widest part of the prothorax at the base, the sides slightly rounded, the base distinctly grooved on each side for the reception of the hind angles of the prothorax, the humeri swollen and directed a little outwards, with rows of very coarse elongate distantly placed impressions, the impressions nearly equal in size throughout, the interstices almost flat and shallowly though very distinctly punctured; beneath (including the flanks of the prothorax) very coarsely punctured; prosternum declivous, the apex with a small raised point in the middle; legs short and very stout, the femora and tibiæ very coarsely and closely punctured.

Length 12 millim.; breadth $5\frac{2}{3}$ millim.

Hab. Mexico (*Sallé, ex coll. Sturm*).

I have adopted the MS. name by which this insect is labelled in the Sallé collection. *H. punctato-striatus* may be known by its broad, greatly developed, and closely and coarsely punctured thorax, broad scutellum, prominent humeri, the rows of equal-sized very coarse elongate impressions on the elytra, the short, stout, coarsely punctured legs, &c.; it cannot be compared with any other species here recorded. The single example before me is greatly mutilated, and without abdomen and antennæ.

9. **Helops pueblensis.**

Oblong ovate, very convex, dark bronze, moderately shining. Head very closely and rather coarsely punctured, the punctures more or less longitudinal in form and here and there obliquely or longitudinally confluent, the eyes only feebly convex; antennæ (female) reaching to about the first fourth of the elytra, rather slender; prothorax transverse, very feebly margined, the sides slightly rounded, widest in the middle, and about equally narrowed towards the base and apex, the angles obtuse, the apex (if viewed from above) and base almost straight, the base very obsoletely margined, the basal foveæ shallow and indistinct, the surface very closely and somewhat coarsely punctured, the punctures here and there longitudinally confluent, and with a narrow irregular smooth longitudinal space on the middle of the disc; scutellum large, very strongly transverse; elytra a little wider than the prothorax at the base, moderately long, slightly rounded at the sides, the base sinuate on each side and grooved within for the reception of the hind angles of the prothorax, the humeri rounded but prominent in front, with rows of moderately coarse elongate closely placed impressions, the impressions here and there confluent, the interstices flat and sparingly but very distinctly punctured, the third a little raised at the apex; beneath sparingly but rather coarsely punctured, the ventral surface also strongly longitudinally wrinkled, the flanks of the prothorax closely punctured, the punctures elongate in form and here and there confluent; prosternum declivous.

Length $9\frac{1}{3}$ millim.; breadth $4\frac{1}{2}$ millim. (♀.)

Hab. Mexico, Matamoros Izucar in Puebla (*Höge*).

One example. From *H. coxalis* this species is separated by the thorax being less rounded at the sides, less transverse, and very feebly margined, the margins not grooved within; the elytra longer, with rows of coarse elongate impressions, the interstices flat and distinctly punctured, &c. From the North-American *H. æreus* by the very different sculpture of the flanks of the thorax, and the obtuse (not rectangular) hind angles; the coarser elytral impressions, &c.

10. **Helops coxalis.** (Tab. XIII. fig. 25, ♂.)

Oblong ovate, convex, brownish-bronze, with a slight golden tint, moderately shining. Head shallowly transversely impressed in front, closely and coarsely punctured, the punctures obliquely or longitudinally

confluent; antennæ moderately long, but little shorter in the female, very slightly widened outwardly, the apical joint longer than the tenth, dark ferruginous; prothorax broad, much wider than long, rather strongly margined, the margins shallowly grooved within, the sides rounded, very slightly and obliquely narrowing behind, and more distinctly narrowing in front, the anterior angles deflexed and rounded, the apex arcuate emarginate (almost straight when viewed from above), the hind angles obtuse, the base almost straight though a little emarginate in front of the scutellum, the basal foveæ obsolete, the surface coarsely, closely, and equally punctured (a little more finely so than the head), the punctures longitudinal in form and here and there confluent; scutellum strongly transverse; elytra the width of or scarcely wider than the prothorax at the base, rather short, a little rounded at the sides, widest in the middle, subtruncate at the base, the humeri not prominent, regularly and somewhat deeply punctate-striate, the punctures elongate, rather coarse, and closely placed, the interstices feebly convex and almost smooth, the apices slightly impressed within and produced and divergent in the male; legs rather short, the femora comparatively smooth, the basal half of the latter fringed with hair beneath, the tibiæ pubescent on their inner edge; beneath slightly shining, somewhat coarsely and closely punctured, the ventral surface also strongly longitudinally wrinkled, the flanks of the prothorax coarsely punctured within and shallowly strigose without; prosternum declivous, the apex convex; mesosternum very narrow, almost unimpressed.

Length $7\frac{3}{4}$–$9\frac{1}{4}$ millim.; breadth $4\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Morelia in Michoacan (*Höge*).

Two examples. This insect should be placed near *H. æreus*, Germ. (referred by Allard to his genus *Stenomax*), from which it will be readily known by the less rugosely punctured head and thorax; the latter broader and more transverse, more strongly margined, rounded at the sides, and with obtuse anterior angles; the elytra less widened posteriorly, with more coarsely punctured striæ and rather convex interstices; the flanks of the prothorax beneath not coarsely strigose, &c. *H. coxalis* may, however, be known from its allies by the very narrow and almost unimpressed mesosternum.

11. **Helops suavis.**

Ovate, convex, bronze-brown, with a slight golden tint, shining. Head short, broad, shallowly transversely impressed in front, coarsely, irregularly, and somewhat sparingly punctured, the punctures here and there longitudinal in form; antennæ long, still longer and passing the middle of the elytra in the male, very slightly widening outwardly, the apical joint longer than the tenth, reddish-brown; prothorax convex, very broad, much wider than long, rather strongly margined, the sides rounded, a little narrowed and sometimes feebly sinuate behind, and more distinctly narrowed in front, the anterior angles deflexed and rounded, the apex arcuate emarginate (almost straight when viewed from above), the hind angles obtuse, the base feebly bisinuate, straight in the middle, and very distinctly margined, the basal foveæ obsolete or scarcely visible, the surface sparingly, shallowly, and somewhat finely punctured; scutellum strongly transverse; elytra short, the width of the prothorax at the base, widest in the middle, a little rounded at the sides, subtruncate at the base, the humeri not very prominent, finely but deeply punctate-striate, the punctures moderately coarse, oblong, and distantly placed, the interstices broad, nearly flat on the disc, feebly convex outwardly, and almost smooth; legs reddish-brown, the tibiæ comparatively smooth; beneath shining, very sparingly, shallowly, and finely punctured, the first ventral segment usually more coarsely so, the sides of the metasternum almost impunctate, the flanks of the prothorax very shallowly strigose or smooth; prosternum gradually declivous, somewhat convexly or subacuminately produced; mesosternum narrow, feebly excavate.

Length $5\frac{1}{2}$–8 millim.; breadth 3–$4\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Juquila (*Sallé*); Guatemala (*Sallé*).

Three examples, a male from Mexico, and a pair from Guatemala. This insect will be known amongst its allies by the broad, short, rather strongly margined, and shallowly and sparingly punctured thorax, the sides of which are more or less rounded and the anterior angles not prominent; the long antennæ; the short convex elytra, &c. I can suggest no very near ally to *H. suavis*, though, like the preceding species, it approaches the North-American *H. æreus*, Germ., in some of its characters. The Mexican example has the head and the sides of the thorax rather more coarsely punctured, the thoracic margins shallowly grooved within, and the under surface smoother than in the Guatemalan exponents; it agrees, however, perfectly in other respects.

12. **Helops cupripennis.**

Oblong ovate, convex, bright bronze, the elytra slightly cupreous in tint. Head very shallowly transversely impressed in front, rather coarsely, irregularly, and somewhat sparingly punctured, the epistoma slightly emarginate; antennæ (female) rather short, dark ferruginous; prothorax longitudinally convex, transverse, rather strongly margined, the sides a little rounded about the middle, slightly narrowed and sinuate behind, and more distinctly narrowed and sinuate in front, the anterior angles rounded but a little prominent, the apex arcuate emarginate (almost straight when viewed from above), the hind angles obtuse, the base almost straight, the basal foveæ obsolete, the disc shallowly impressed before the base and with an ill-defined smooth central line, the surface moderately coarsely and somewhat closely punctured; scutellum strongly transverse; elytra distinctly wider than the prothorax at the base, moderately long, somewhat ovate, strongly margined, the humeri rounded but a little prominent in front, with rows of moderately coarse shallow elongate distantly placed impressions, the impressions much finer and shallower towards the apex, the interstices quite flat and very sparingly, shallowly, and finely punctured; legs rather short, the basal halves of the femora clothed with long hair beneath; beneath, including the whole of the metasternum, coarsely but sparingly punctured, the flanks of the prothorax more closely so, the ventral surface more finely punctured in the middle and also strongly longitudinally wrinkled; prosternum declivous, rather convex; mesosternum feebly impressed.

Length 8 millim.; breadth 4 millim. (♀.)

Hab. Mexico, Parada (*Sallé*).

One example. This insect also comes near *H. æreus*, Germ., but is separated from that species (and the allied forms noticed here) by the elytra not being striate but with rows of elongate impressions; the head and thorax smoother, &c. Compared with *H. coxalis* and *H. suavis* the thorax is relatively narrower, the elytral interstices flatter, the antennæ shorter, &c.

13. **Helops panamensis.** (Tab. XIII. fig. 26, ♂.)

Oblong ovate, moderately convex, bright golden-bronze. Head short, broad, rather deeply transversely impressed in front, closely and somewhat coarsely punctured, the punctures here and there confluent, the epistoma truncate in front; eyes large, rounded; antennæ long, passing the middle of the elytra (in the male), widening a little outwardly, joints 9 and 10 subtriangular, the apical joint oblong ovate and longer than the tenth, ferruginous; prothorax broad, a little wider than long, strongly margined, the margins shallowly grooved within, widest before the middle, the sides rounded anteriorly, narrowed and strongly sinuate behind, and very slightly narrowing in front, the anterior angles deflexed, rounded, and not prominent, the apex very feebly emarginate (almost straight if viewed from above), the hind angles rectangular, the base feebly sinuate on each side and straight in the middle, the basal foveæ long and deep, the surface somewhat closely and rather coarsely punctured; elytra a little wider than the prothorax, subtruncate at

the base, ovate, widest in the middle, the humeri a little prominent in front, slightly flattened on the disc, rather deeply striate, the striæ with fine distantly placed oblong impressions, the interstices almost flat and very minutely and sparingly punctured; legs reddish-brown; beneath, including the flanks of the prothorax, very sparingly and finely punctured; prosternum a little declivous, subacuminately produced; mesosternum narrow, rather deeply excavate, the sides rounded off in front.

Length $5\frac{1}{2}$ millim.; breadth $2\frac{1}{2}$ millim. (♂.)

Hab. Panama, Peña Blanca 3000 feet (*Champion*).

One example. I can suggest no near ally to this pretty little distinct species, though it somewhat resembles *H. suavis*; from this latter it is readily distinguished by its shorter head, larger eyes, less convex form (more flattened on the disc), longer and more strongly margined thorax, deep basal foveæ, flatter elytral interstices, &c.

14. **Helops sumptuosus.** (Tab. XIII. fig. 27, ♂.)

Diastixus sumptuosus, Allard, Rév. Hélopides, L'Abeille, xiv. p. 57 [1]; Mittheil. der schweiz. ent. Ges. v. pp. 44 and 184 [2].

Hab. Mexico (*Bruck* [1 2]), Puebla (*Sallé*).

15. **Helops punctiventris.**

Oblong ovate, very convex, blackish-bronze, the elytra lighter in tint, rather dull. Head rather long, coarsely and moderately closely punctured, the epistoma more closely punctured, greatly developed, shallowly emarginate in front, and limited behind by a deep transverse groove, the intraocular space a little flattened, the eyes narrow; antennæ (female) short, stout, scarcely passing the base of the prothorax, scarcely widening outwardly, piceous; prothorax broader than long, strongly convex, scarcely perceptibly margined, the sides moderately rounded, narrowing a little more in front than behind and almost imperceptibly sinuate before the base, the apex rather deeply emarginate (nearly straight if viewed from above), the anterior angles deflexed and a little prominent though obtuse, the base truncate, the basal foveæ quite obsolete, the hind angles obtuse, the surface without impressions and coarsely and closely punctured, the punctures a little more scattered on the posterior half of the disc; scutellum very broad, transverse; elytra moderately long, convex, widest about the middle, a little wider than the prothorax at the base, the base nearly straight, the humeri rather obtuse, with rows of rather coarse, somewhat distantly placed, elongate impressions, the interstices flat, shallowly and sparingly punctured on the disc and indistinctly so at the sides and apex; beneath more shining, coarsely and sparingly punctured, the ventral surface also strongly longitudinally wrinkled, the flanks of the prothorax very coarsely and closely punctured; prosternum declivous, the apex slightly transversely raised; legs short, stout, very coarsely and closely punctured.

Length 9 millim.; breadth 4 millim. (♀.)

Hab. Mexico, Guanajuato (*Sallé*).

Two examples, both apparently females. This species is not very nearly allied to any other recorded here; it somewhat resembles certain Old-World forms, *e. g.* the Algerian *H. heteromorphus*, Luc. (placed by Allard in his genus *Diastixus*), &c. *H. punctiventris* may be known by its longitudinally convex, very obsoletely margined and coarsely and closely punctured thorax, convex elytra, coarsely punctured under surface and legs (the femora more coarsely punctured than the tibiæ), short, stout antennæ and legs, &c.

Group TALANIDES.

This group, the "Dignamptini" of Leconte and Horn [*cf.* Class. Col. N. Am. p. 385 (1883)], contains a single isolated genus, *Talanus*, Jacq.-Duval (=*Dignamptus*, Lec.), and is peculiar to the New World.

TALANUS.

Talanus, Dej. Cat. 3rd edit. p. 232 (1837); Jacquelin-Duval, in Sagra's Hist. fisica polit. y nat. de Cuba, vii., Ins. p. 66 (1856); French edit. p. 156 (1857); Gemminger and Harold, Cat. vii. p. 2041 (1870); Mäklin, Œfv. Finsk. Vetensk.-Soc. Förh. xx. p. 96 (1878).
Dignamptus, Leconte, Proc. Amer. Phil. Soc. xvii. p. 421 (1877).

A genus containing many closely-allied species and characteristic of the forest-region of Tropical America, but extending northwards to the south-eastern United States. Eight species have been described—two from the Antilles, two from Florida, and four from Tropical South America. *Talanus* is remarkable on account of the peculiar form of the ligula, a character which appears to have escaped the observation of previous authors.

In the five species I have examined (*T. neotropicalis*, *T. lecontei*, *T. laticeps*, *T. subexaratus*, and *T. apterus*) the thin and almost membranous ligula is very greatly extended on each side laterally, and abruptly incurved, raised, and acuminate at the outer ends, the latter being armed with two or three coarse long projecting setæ, the front margin with finer and shorter hairs; the abrupt incurving of the outer ends and the concave shape allowing the two basal joints of the labial palpi to be received within in repose (Tab. XIV. fig. 4 *a*): this structure is very different from that of any species of "Helopides," or indeed of any other member of the Tenebrionidæ, known to me.

The outer lobe of the maxilla is very large and broad, and furnished with a dense fringe of very long and coarse hairs in front, the inner lobe being quite small (Tab. XIV. fig. 4 *b*). The mandibles are slightly bifid (very distinctly so in *T. apterus*) at the apex, and have on their outer side a membranous extension.

The female is furnished with an ovipositor enclosed between two long vertical sheaths (often extruded at time of death) placed close together, much as in *Acropteron*, *Saziches*, &c.); the eggs are doubtless laid in the crevices of the bark of decaying trees.

The different species, as noted by Leconte, bear a certain resemblance to the smaller forms of Languriidæ, and several appear to be very variable in size; they are found by beating the decaying leaves and branches of fallen trees.

1. *Species winged.*

A. *Antennæ comparatively short, the ninth and tenth joints more or less transverse.*

a. *Elytra with rows of impressions placed upon shallow or obsolete striæ; the interstices flat (in* T. interstitialis *convex at the apex, and the striæ in consequence deeper behind).*

1. Talanus neotropicalis. (Tab. XIV. fig. 1, ♂.)

Elongate, subcylindrical, brownish-castaneous or castaneous, with a slight æneous tinge, shining. Head rather closely and somewhat coarsely punctured, deeply transversely impressed in front; antennæ stout, about reaching to the base of the prothorax, widening outwardly, joints 8–10 wider than 7 and equal in width, 9 and 10 transverse, the apical joint ovate and fully twice as long as and rather wider than 10, black, the three or four basal joints and the extreme apex ferruginous; prothorax very convex, the sides a little constricted behind, the disc shallowly transversely impressed before the base, the hind angles subrectangular, the surface very coarsely and somewhat closely punctured, an oblique slightly impressed space on each side some distance before the base more sparingly punctured; elytra comparatively very long, parallel, with rows of rather coarse rounded impressions placed upon almost obsolete striæ, the impressions becoming coarser and a little more distant one from another towards the base and much finer and closer towards the apex, the interstices flat and almost smooth; legs brownish-piceous, the femora often more or less castaneous; anterior and intermediate tibiæ each with a triangular tooth, and the posterior tibiæ with two small teeth (the hinder one of which is sometimes obsolete) on the inner side some distance before the apex, in the male; beneath shining, very finely and sparingly, the sides of the metasternum and side pieces and the flanks of the prothorax very coarsely, punctured.

Length 8–9 millim. (♂ ♀.)

Hab. Guatemala (*colls. F. Bates, Brit. Mus.*), El Reposo, San Gerónimo (*Champion*); Costa Rica (*Sallé, coll. F. Bates*).—Brazil, Rio Janeiro.

Numerous examples. This species is closely allied to the Cuban *T. cribrarius*, Jacq. Duv., but larger, longer, and more or less castaneous in colour; the thorax rather broader; the elytra relatively longer, and with the punctures not quite so closely placed and finer and shallower posteriorly; the antennæ stouter, &c.; the tibiæ are similarly armed in the male, but with the teeth rather finer.

A specimen from Rio Janeiro in Mr. F. Bates's collection appears to be conspecific with our insect.

An example from San Gerónimo is figured.

2. Talanus lævipennis.

Allied to *T. neotropicalis*, and differing as follows:—the antennæ not quite so stout, and with the apical joint rather shorter; the head more finely punctured; the prothorax very much more finely, more shallowly, and more sparingly punctured, and rather strongly obliquely impressed on each side some distance beyond the middle, the sides a little constricted behind, the hind angles fine and acute; the elytra much shorter, narrowing from the middle, and almost elongate-ovate in form (not parallel), with rows of very shallow fine impressions, the impressions still finer towards the apex (not coarser towards the base, as in *T. neotropicalis*), the interstices quite flat and almost smooth, and the humeri more rounded; the legs smoother; the upper surface brownish-bronze in tint; the under surface as in *T. neotropicalis*.

Length 8–8½ millim. (♀.)

Hab. GUATEMALA, Las Mercedes, Cerro Zunil (*Champion*).

Four female examples. This insect is distinguished from its allies by the fine and very lightly impressed elytral punctures, the punctures being shallower and finer than in any other species of the genus known to me.

3. Talanus subopacus.

Elongate, subcylindrical, brownish-piceous or dark reddish-brown, rather dull. Head rather closely and finely punctured, deeply transversely impressed in front; antennæ as in *T. neotropicalis*; prothorax coarsely and very irregularly punctured, the sides broadly behind the middle (in one example with large smooth spaces) and the base very much more sparingly so, the sides rather strongly sinuate behind, the hind angles acute and directed outwards; elytra strongly convex, comparatively broad, long, subparallel to beyond the middle, the scutellar region depressed, the humeri a little prominent in front, with rows of rather fine slightly elongate impressions, the impressions distant one from another and gradually becoming very much finer and shallower towards the apex, the interstices quite flat and almost smooth; anterior and intermediate tibiæ each with a sharp triangular tooth, and the posterior tibiæ with two or three small teeth on the inner side some distance before the apex, in the male; beneath very sparingly and finely, the flanks of the prothorax very coarsely and closely, punctured, the sides of the metasternum and side pieces with scattered shallow coarse impressions.

Length $9\frac{1}{3}$–$9\frac{1}{2}$ millim. (♂.)

Hab. MEXICO, Jalapa (*Höge*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*).

Two male examples. This species can only be compared with *T. lævipennis*, from which it is separated by its larger size and subopaque surface; the thorax is more coarsely punctured, and with much more acute hind angles; and the elytra are broader, longer, and more parallel, and with the punctures coarser, more elongate, and more distant one from another.

4. Talanus lecontei.

Elongate, subcylindrical, varying in colour from dark brownish-castaneous to castaneous, with a slight bronzy tint, shining. Head closely and moderately finely punctured, deeply transversely impressed in front: antennæ stout, reaching to a little beyond the base of the prothorax, joint 7 much wider than 6 and subtransverse, joints 8–10 wider than 7, almost equal in width and transverse, the apical joint ovate and half as long again as the tenth, piceous, the three or four basal joints and the apex ferruginous, sometimes entirely ferruginous; prothorax a little narrowed and sinuate behind, the hind angles rectangular, the surface coarsely and rather closely punctured, the disc with a shallow transverse impression some distance before the base, the impression extending more or less distinctly on each side to the lateral margin; elytra long, subparallel, with rows of coarse slightly elongate impressions placed upon almost obsolete striæ, the impressions somewhat closely placed and becoming gradually finer towards the apex, the interstices flat and exceedingly minutely punctured; legs varying in colour from piceous to ferruginous; the tibiæ in the male each with a sharp triangular tooth on the inner side some distance before the apex; beneath very sparingly and minutely, the flanks of the prothorax and the metasternum narrowly at the sides, and the side pieces very coarsely, punctured.

Length $4\frac{3}{4}$–$6\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO, Vera Cruz (*Sallé*), Jalapa, Cordova, Teapa in Tabasco (*Höge*); BRITISH HONDURAS, Belize, R. Hondo, R. Sarstoon (*Blancaneaux*); GUATEMALA, Panzos, San Juan in Vera Paz, Chiacam, Cahabon (*Champion*).

Var. Smaller, narrower, and more parallel, the tooth on the tibiæ in the male smaller.
Length $4\frac{1}{2}$–5 millim. (♂ ♀.)

Hab. MEXICO, Cordova, Jalapa (*Höge*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*).

Apparently a common insect in the above-mentioned localities. *T. lecontei* resembles *T. neotropicalis* in general facies and in the sculpture of the upper surface, but is only about half the size, and has the antennæ relatively shorter, not so stout, and with the apical joint less elongate; the elytra shorter; the posterior tibiæ in the male armed with a single sharp tooth (like that on the other tibiæ), which is placed not very far from the apex (in *T. neotropicalis* the two comparatively smaller teeth are placed nearer the middle).

The variety is connected with the type by intermediate forms, though at first sight appearing distinct.

Dignamptus langurinus, Lec., from Florida, to judge from the description, is an ally of this species.

T. lecontei is apparently confined to the Atlantic slope.

5. Talanus interstitialis.

Allied to *T. lecontei*, and differing as follows:—the prothorax more strongly sinuate at the sides behind; the impressions on the apical portion of the elytra deeper (not becoming quite so fine or shallow behind as in *T. lecontei*), the interstices slightly but distinctly convex towards the apex; the tibiæ in the male (the middle pair especially) more curved, each armed with a small triangular tooth on the inner side immediately before the apex; the rest as in *T. lecontei*.
Length 5–$6\frac{2}{3}$ millim. (♂ ♀.)

Hab. MEXICO, Tapachula in Chiapas (*Höge*); GUATEMALA, El Tumbador, El Reposo, Paraiso, Las Mercedes, Pantaleon, Zapote (*Champion*).

Many specimens. This insect is sufficiently distinguished from *T. lecontei* by the different male characters (the tooth on the inner side of the tibiæ being placed much nearer the apex), and the convex interstices at the apex of the elytra.

T. interstitialis seems to replace *T. lecontei* on the Pacific slope.

6. Talanus colombianus.

Talanus columbianus, Mäkl. Œfv. Finsk. Vetensk.-Soc. Förh. xx. p. 99 [1].

Var. Smaller, narrower, and more elongate; the elytral impressions closer and deeper. (♂.)

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).—COLOMBIA [1].

Five examples, four males and one female, of a *Talanus* from the State of Panama are apparently referable to this species. These specimens differ from *T. lecontei* as follows:—The thorax is more rounded at the sides anteriorly, more constricted behind, and the transverse impression before the base is deeper; and the elytra are less parallel, and the impressions are shallower, finer, and not quite so closely placed.

In general facies this insect perhaps more nearly resembles *T. lævipennis*; it will be known, however, from that species by its much smaller size and narrower form; the thorax differently shaped and more closely punctured, and with a deep basal impression; and the punctures on the basal half of the elytra more deeply impressed.

The small variety (a single immature male) is analogous to the small form of *T. lecontei*.

Our examples vary in size from $4\frac{1}{2}$–$6\frac{1}{3}$ millim.

b. *Elytra punctate-striate, the striæ more distinctly impressed.*

* *Interstices more or less convex.*

7. Talanus laticeps. (Tab. XIV. fig. 2, ♂.)

Elongate, rather depressed, dark ferruginous, the elytra a little lighter, moderately shining. Head broad, very shallowly, finely, and sparingly punctured, the frontal transverse impression broad and moderately deep; eyes widely separated, strongly transversely convex and projecting laterally; antennæ moderately stout, joints 8–10 wider than 7, equal in width and decreasing a little in length outwardly, the apical joint ovate and about twice as long as the tenth, ferruginous; prothorax very acutely margined, the sides strongly narrowed and sinuate behind and rounded anteriorly, the hind angles subacute, the surface very coarsely and closely punctured, the disc with a very deep transverse impression (not extending to the lateral margins) before the base; elytra rather broad, depressed on the disc, subparallel in their basal half, deeply striate throughout, the striæ with coarse elongate very closely placed impressions, the interstices convex (still more strongly so at the sides and apex) and almost smooth; legs ferruginous, the tarsi beneath, and the tibiæ on the inner side towards the apex, thickly clothed with fulvous hair; the anterior and intermediate tibiæ each with a sharp triangular tooth some distance before the apex, and the posterior tibiæ with three or four teeth in their apical third, on the inner side, in the male; beneath more shining, rather sparingly but comparatively coarsely punctured, the sides (broadly) and the front of the metasternum much more coarsely so, the flanks of the prothorax very coarsely punctured.

Length 7–$8\frac{1}{4}$ millim. (♂.)

Hab. Panama (*coll. F. Bates*).

Two male examples. This species is separated from all the others here recorded by the very broad and comparatively smooth head; the transverse, very convex, widely separated, and laterally projecting eyes; the acutely margined and posteriorly constricted thorax, with very deep basal impression; the coarsely and deeply punctate-striate elytra, with the interstices convex, and the disc flattened; the comparatively coarsely punctured under surface; and the strongly pronounced male characters. The tarsi and tibiæ are more thickly clothed with hair than in the allied forms, the hair on the tibiæ almost hiding the teeth from view.

8. Talanus subexaratus.

Talanus subexaratus, Mäkl. Œfv. Finsk. Vetensk.-Soc. Förh. xx. p. 102 [1].

Hab. Mexico, Tuxtla, Cordova (*Sallé, Höge*), Jalapa, Tapachula in Chiapas (*Höge*); British Honduras, Belize, R. Hondo (*Blancaneaux*); Guatemala, El Tumbador, El

Reposo, Zapote, Guatemala city, San Gerónimo, San Juan in Vera Paz, Senahu, Cahabon, Panzos, Teleman (*Champion*); NICARAGUA, Chontales (*Belt*); COSTA RICA (*Sallé*); PANAMA, Bugaba, Volcan de Chiriqui, David, Tolé (*Champion*).—COLOMBIA [1]; VENEZUELA; AMAZONS, Santarem.

This is the commonest and most widely distributed species of the genus in our region; it agrees sufficiently well with Mäklin's description [1] to be identified therewith. *T. subexaratus* will be known from *T. lecontei* and its allies by the elytra being shorter, broader, less parallel, and comparatively very deeply and coarsely punctate-striate, the interstices smooth and more or less convex (sometimes flatter on the basal half of the disc); the antennæ about reaching to the base of the thorax, widening towards the apex, and with the ninth and tenth joints more or less (in some specimens strongly) transverse. Mäklin's description of this (and also of his other) species is based upon very insufficient material. The long series of upwards of seventy examples before me vary greatly in size, colour, and sculpture, and apparently, at first sight, represent several species; but as the different forms were collected together in several localities, and are more or less connected one with another, I prefer to regard them as representing one very variable species.

In addition to the rufo-ferruginous variety α (common to several other species of the genus), noticed by Mäklin [1], I here indicate one other:—

Var. β. Elytra rather longer, the striæ not so deeply impressed, the punctures still coarser and more scattered and more elongate in form.

Hab. PANAMA, Volcan de Chiriqui (*Champion*). Two examples (♂ ♀).

In some few examples the inner side of the posterior tibiæ of the male is finely and irregularly serrate towards the apex, instead of being armed with a small triangular tooth, as is usually the case. The hind angles of the thorax are usually rectangular, occasionally acute. Our specimens vary in size from 5–7½ millim. *T. humilis*, Mäkl., from Colombia, to judge from the description, may possibly be a small form of this variable insect.

9. **Talanus guatemalensis.** (Tab. XIV. fig. 3, ♂.)

Elongate, convex, brownish-piceous, the elytra æneous in tint, shining. Head closely and coarsely punctured, the transverse frontal impression deep; antennæ reaching to a little beyond the base of the prothorax, joints 8–10 wider than 7 and about equal in width, the tenth transverse, the apical joint ovate and nearly twice as long as the preceding, piceous, with the basal joints ferruginous, or entirely ferruginous; prothorax coarsely and somewhat closely punctured, more sparingly so on the disc and towards the base, the sides a little narrowed and sinuate behind, the hind angles rectangular or subacute, a transverse impression extending to the lateral margins some little distance before the base; elytra comparatively rather short, convex, somewhat ovate in form, widest in the middle, distinctly punctate-striate, the impressions rather fine, elongate, coarser towards the sides, and finer and shallower on the posterior half of the disc, the interstices flat (or nearly so) on the disc, a little convex outwardly and towards the apex, and almost smooth; the tibiæ in the male each with a sharp triangular tooth (that on the

intermediate pair the longest) on the inner side some distance before the apex; beneath sparingly and very finely, the flanks of the prothorax very coarsely, punctured.

Length $4\frac{3}{4}$–6 millim. (♂ ♀.)

Hab. GUATEMALA, Cerro Zunil, Las Mercedes (*Champion*).

Six examples. Allied to *T. æneipennis*, from which it is separated by the more ovate and more convex elytra, and the interstices convex towards the apex (in *T. æneipennis* they are flat throughout); the flanks of the prothorax more sparingly but still more coarsely punctured; and the metasternum almost without coarse impressions at the sides.

** *Interstices flat.*

10. Talanus ater.

Elongate, subcylindrical, black, with a very slight bronzy tint, shining. Head closely and rather finely punctured, deeply transversely impressed in front; antennæ moderately stout, joints 8–10 wider than 7 and equal in width, 9 and 10 transverse, the apical joint nearly twice as long as the tenth and somewhat bluntly rounded at the apex, black; prothorax very slightly sinuate at the sides behind the middle, the hind angles acute and directed outwards, the surface coarsely and somewhat closely punctured, more sparingly so at the sides behind, a shallow transverse impression on the disc before the base, the impression obliquely extending on each side to the lateral margin; elytra moderately long, subparallel in their basal half, finely and very lightly striate, the striæ with fine, slightly elongate, closely placed impressions, the impressions becoming coarser towards the base and shallower towards the apex, the sutural stria (except at the base) and the fifth and sixth striæ in their basal fourth more deeply impressed, the interstices flat and almost smooth; legs comparatively smooth, shining, black; beneath very finely and sparingly, the flanks of the prothorax very coarsely, punctured, the sides of the metasternum and side pieces with coarse impressions.

Length $6\frac{1}{4}$ millim. (♀.)

Hab. PANAMA, Bugaba (*Champion*).

One female example. This species is distinguished from all the others of the genus here recorded by the finely and lightly striate elytra, the striæ finely and shallowly punctured; and also by its shining black colour.

11. Talanus æneipennis.

Elongate, subcylindrical, brownish-bronze, the elytra æneous in tint, shining. Head, antennæ, and prothorax much as in *T. guatemalensis*; elytra subparallel to beyond the middle, lightly but distinctly striate, the striæ with rather fine, closely placed, elongate impressions, the impressions coarser towards the base and shallower towards the apex, the interstices flat and almost smooth; the male tibiæ and under surface as in *T. guatemalensis*.

Length 5–$5\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO, Tuxtla (*Sallé*); BRITISH HONDURAS, Belize (*Blancaneaux*).

Three examples. The æneous tint, flat interstices, and more lightly and finely punctate-striate elytra sufficiently distinguish this species from *T. subexaratus*; the above-mentioned differences and the rather narrower thorax separate it from *T. guatemalensis*.

B. *Antennæ longer and more slender, the ninth and tenth joints longer than broad.*

12. **Talanus longicornis.**

Moderately elongate, convex, varying in colour from piceous to ferruginous, shining. Head coarsely and rather closely punctured, the transverse frontal impression usually deep; antennæ slender, widening very little outwardly, comparatively long, passing considerably beyond the base of the prothorax, joints 7–10 subtriangular in form and longer than broad, the apical joint ovate and about half as long again as the tenth, ferruginous; prothorax coarsely, irregularly, and somewhat closely punctured, the sides but little narrowed behind (in some examples nearly straight), the hind angles more or less acute; elytra convex, subparallel in their basal half, widest in the middle, deeply striate, the striæ with elongate, moderately coarse, rather closely placed impressions, the impressions coarser towards the sides and finer and shallower towards the apex, the interstices feebly convex (or almost flat) on the disc, more strongly so towards the sides and apex, and almost smooth; the anterior and intermediate tibiæ each with a sharp triangular tooth some distance before the apex, and the posterior tibiæ serrate in their outer half, on the inner side, in the male; beneath almost smooth, the ventral surface very finely, shallowly, longitudinally wrinkled, the sides of the metasternum and the side pieces with coarse impressions, the flanks of the prothorax very coarsely but rather sparingly punctured.

Length 5–7⅓ millim. (♂ ♀.)

Hab. British Honduras, R. Hondo (*Blancaneaux*); Guatemala, San Juan in Vera Paz (*Champion*); Nicaragua, Chontales (*Belt*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

This insect, like several of the allied species, varies considerably in size; it will be recognized amongst its winged allies by the slender ferruginous antennæ (in this respect resembling *T. apterus*, though with these organs rather shorter), the penultimate joints of which are subtriangular and much longer than broad. The elytra are sculptured much as in *T. subexaratus*, but with the striæ less coarsely punctured.

2. *Species apterous; antennæ long and slender, the penultimate joints longer than broad; elytra punctate-striate.*

13. **Talanus apterus.** (Tab. XIV. figg. 4, ♂; 4 *a*, labium; 4 *b*, maxilla and maxillary palpus.)

Elongate ovate, very convex, bronze-black, shining, Head sparingly but coarsely punctured, the epistoma much smoother, very deeply transversely impressed in front; antennæ long, extending far beyond the base of the prothorax, slender, gradually widening outwardly, joints 6–10 subtriangular, 8–10 equal in width but decreasing a little in length outwardly, the apical joint ovate and about half as long again as the tenth, light ferruginous (the outer joints in one example a little infuscate); prothorax strongly rounded at the sides anteriorly, narrowed and sinuate behind, the hind angles rectangular, the surface very coarsely, irregularly, and somewhat sparingly punctured, a shallow oblique impression on each side (occasionally connected by a shallow transverse impression on the disc) some distance behind the middle; elytra comparatively short, ovate, almost gibbous, broadly truncate at the base, more bronzy in tint than the prothorax, narrowly but deeply striate from the base to the apex, the striæ finely crenate-punctate on the disc and rather more coarsely so at the sides, the interstices feebly convex on the disc and strongly so at the sides and apex, smooth; legs smooth, brownish-piceous, the coxæ, the base of the femora, the outer half of the tibiæ, and the tarsi ferruginous; anterior and intermediate tibiæ each with a sharp triangular tooth, and the posterior tibiæ with three or four very small teeth, on the inner side some distance before the apex, in the male; beneath almost smooth, the ventral surface very minutely punctured along the

middle, the flanks of the prothorax with a few scattered very shallow impressions; metasternum very short; intercoxal process rounded; body apterous.

Length $6\frac{1}{2}$–$7\frac{2}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, Senahu and San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Numerous examples. In the colour and structure of the antennæ this insect resembles *T. longicornis*, but is readily separated from that species by the ovate and almost gibbous elytra (the sides of which are not abruptly narrowed immediately before the base as in the winged forms), the smoother under surface, absence of wings, &c. The two examples from the State of Panama have the elytra castaneous in colour, and the thorax not quite so coarsely punctured; both, however, appear to be a little immature.

We figure a male example from Senahu.

Group **AMARYGMIDES.**

This group is represented in the New World by a single genus, *Pyanisia*. With the "Amarygmides" we commence Lacordaire's second great division, the "Otidogénes," of the Tenebrionidæ; in this and the following group the sides of the front above the point of insertion of the antennæ (the antennary orbits) are raised above the level of the head and form an oblique ridge.

PYANISIA.

Pyanisia, Castelnau, Hist. Nat. Ins. Col. ii. p. 235 (1840); Lacordaire, Gen. Col. v. p. 476 (1859).
Cymathotes, Blanchard, Hist. Nat. Ins. ii. p. 33 (1845).
Cymatothes, Dej. Cat. 3rd edit. p. 230; Solier, Studi Entom. i. p. 178, t. 6. figg. 1–5 (1848).

A Tropical-American genus ranging from Brazil to Northern Mexico, and also inhabiting the Antilles *; it now contains eleven described species, four of which are peculiar to our region. These insects are found beneath loose bark or about fungoid growths on decaying trees, often in gloomy places in the forest; the spotted species resemble various Erotylidæ inhabiting the same district.

In the vertically-inclined head *Pyanisia* approaches *Talanus*.

1. *Base of the prothorax very strongly bisinuate.*

a. *Upper surface maculated.*

1. Pyanisia undata.

Helops undatus, Fabr. Ent. Syst. i. p. 122 [1]; Oliv. Ent. iii. 58, p. 11, t. 2. f. 4 [2].
Pyanisia undata, Casteln. Hist. Nat. Ins. Col. ii. p. 235 [3].

* *Hoplonyx uniformis*, C. O. Waterh. (Trans. Ent. Soc. Lond. 1878, p. 306), from Jamaica, is a *Pyanisia*.

Hab. MEXICO, Tuxtla (*Sallé*); BRITISH HONDURAS, Belize, R. Sarstoon (*Blancaneaux*); GUATEMALA, Cahabon, Lanquin, Panzos (*Champion*); NICARAGUA, Chontales (*Belt, Janson*); PANAMA (*coll. F. Bates*), Bugaba (*Champion*).—COLOMBIA; VENEZUELA; GUIANA, Cayenne[1 2 3]; PERU; AMAZONS; BRAZIL.

A very widely distributed insect, ranging almost over the entire forest-region of Tropical America; it appears to chiefly inhabit the low country, though sometimes ascending as high as from 2000 to 3000 feet.

b. *Upper surface dull black.*

2. Pyanisia tristis.

Pyanisia tristis, Casteln. Hist. Nat. Ins. Col. ii. p. 236[1].
Cymatothes unicolor, Sol. Studi Entom. i. p. 182[2].
? *Cymatothes tristis* (Casteln.), Jacq.-Duval, in Sagra's Hist. fisica polit. y nat. de Cuba, vii. Ins. p. 64[3].
Cymatothes lugubris, Dej. Cat. 3rd edit. p. 230[4].

Hab. MEXICO[1 2 3 4], Ventanas (*Forrer*), Cordova, Tuxtla (*Sallé*), Jalapa (*Höge, Morrison*), Las Vigas, Misantla, Tampico, Zapotlan, Tapachula in Chiapas (*Höge*); BRITISH HONDURAS, Belize, R. Hondo, R. Sarstoon (*Blancaneaux*); GUATEMALA, Yzabal (*Sallé*), San Juan in Vera Paz, Cubilguitz, San Joaquin, San Gerónimo, El Reposo, Zapote (*Champion*); NICARAGUA, Chontales (*Belt, Janson*); PANAMA, San Feliz, Tolé, (*Champion*).—CUBA[3].

A common insect throughout our region, though apparently not extending south of the Isthmus of Panama. The two examples from the State of Panama have the elytral interstices perfectly flat.

2. *Base of the prothorax broadly and feebly arcuate.*

Upper surface dull black.

3. Pyanisia opaca.

Cymatothes opacus, Sol. Studi Entom. i. p. 180, t. 6. f. 1[1].
Cymatothes coarctatus, Sol. loc. cit. p. 181[2].

Hab. MEXICO[1 2] (*coll. F. Bates*), Pinos Altos in Chihuahua (*Buchan-Hepburn*), Ventanas (*Forrer*), Ciudad in Durango (*Forrer, Höge*), Refugio in Durango, Las Vigas (*Höge*), Jalapa (*Höge, Morrison*), San Andres Chalchicomula, Oaxaca, Chiapas (*Sallé*), Mochitlan in Guerrero (*Baron*).

This insect is generally distributed and not uncommon in Mexico, extending as far north as the States of Durango and Chihuahua. In the large series of examples (120) before me a great deal of variation is to be found, and I am unable to distinguish more than one species. *Cymatothes coarctatus*, Sol., was, I have little doubt,

based upon a variety of the same species *. The large number of specimens collected by Herr Höge at Las Vigas connect the various forms. Examples from Chihuahua and Durango are rather more elongate and depressed, and with still more prominent humeri: these agree with the description of *Cymatothes opacus*.

4. **Pyanisia longicollis.** (Tab. XIV. fig. 5.)

Oblong ovate, depressed, dull black. Head very closely, shallowly, and somewhat finely punctured; antennæ with joints 8–10 rather longer than broad, piceous or ferruginous; prothorax about as long as broad, as wide as or rather wider in front than at the base, the sides a little rounded about the middle, narrowing thence to the base, very slightly narrowed in front, and sometimes a little sinuate immediately before the obtuse hind angles, the anterior angles rounded, the base broadly and feebly arcuate, straight in the middle, the surface finely and rather sparingly, but very distinctly, punctured; scutellum strongly transverse; elytra moderately long, depressed on the disc, ovate in form and rather abruptly narrowed towards the base, the humeri a little swollen and strongly and subacutely produced in front, with rows of comparatively coarse rather shallow impressions, the impressions placed upon shallow almost obsolete striæ, the interstices flat on the disc, feebly convex towards the sides and apex, and sparingly and very evidently punctured; beneath more shining, rather coarsely and somewhat closely, the flanks of the prothorax very sparingly, punctured; prosternum declivous, grooved in the middle between the coxæ, the apex broadly produced and armed in the middle with a stout conical prominence.

Length 11–13 millim.; breadth 4½–5½ millim. (♂ ♀.)

Hab. Guatemala, Totonicapam 8500 to 10,500 feet, slopes of the Volcan de Fuego above Dueñas 6500 feet (*Champion*).

Numerous examples. *P. longicollis* is separated from *P. opaca* by the thorax being longer and narrower, and rather less rounded at the sides; the elytra more abruptly narrowed at the base and with the humeri still more acutely produced and projecting a little outwardly, and substriate, the punctures of the striæ coarser. The single specimen from Dueñas is rather shorter in form, and has the humeri not quite so prominent; it, no doubt, represents a local variety of the same species.

5. **Pyanisia fumosa.**

Pyanisia fumosa, F. Bates in litt.

Oblong ovate, comparatively short, strongly convex, dull black. Head very shallowly and closely punctured; antennæ with joints 8–10 rather longer than broad, piceous, the five outer joints often ferruginous; prothorax rather broader than long, strongly transversely convex, the sides rounded and about equally narrowed before and behind the middle, the angles but little prominent, the base broadly and feebly arcuate, straight in the middle, the surface smooth; scutellum triangular; elytra comparatively short, ovate, convex, slightly depressed on the basal half of the disc, the humeri moderately produced in front, very finely and lightly striate, the striæ with fine elongate rather closely placed impressions (the impressions still finer on the disc and becoming a little coarser towards the sides), the interstices flat on the disc, slightly convex towards the sides and apex, and almost smooth; beneath more shining, closely and somewhat coarsely punctured, the flanks of the prothorax almost smooth; prosternum declivous, grooved in the middle between the coxæ, the apex scarcely raised.

Length 8–10 millim.; breadth 4–5 millim. (♂ ♀.)

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* *Cymatothes coarctatus*, Sol., is treated by Lacordaire and Gemminger and Harold as synonymous with *P. tristis*, Casteln. From Solier's description it appears to me to be a variety of *P. opaca*.

Hab. GUATEMALA, slopes of the Volcan de Fuego above Capetillo and Dueñas 6400 feet (*Salvin, Champion*), Calderas 6500 feet (*Champion*).

In its very convex and smooth thorax and lightly striate elytra *P. fumosa* resembles *P. tristis*; the base of the thorax, however, is not strongly bisinuate as in that species, but broadly and feebly arcuate as in *P. opaca*; the elytra are ovate in form and very much shorter than in *P. tristis*, and also have more prominent humeri and the base nearly straight.

This insect is only known to me as yet from the forest-clad slopes of the Volcan de Fuego, where both Mr. Salvin and myself have found it not uncommonly.

Group **STRONGYLIIDES.**

This group contains several hundred species, inhabiting the warmer regions of both the Old and the New World, though far more numerous in Tropical America than elsewhere. The described genera are comparatively few in number, and the one genus *Strongylium* at present contains more species than all the others put together. A large number of species, chiefly Mexican, have already been described from our region by Mäklin and J. Thomson.

The secondary sexual organs of all the species I have examined are of the usual character: the males have a simple pointed sheath, and the females a horizontal process with a short style on each side at the apex.

These insects are exceedingly numerous in the forest-regions of Tropical America; they are especially abundant about the decaying timber in burnt forest-clearings, in company with species of Erotylidæ; and are also frequently found upon leaves. The earlier stages are no doubt passed in decaying wood or in the fungoid growths attached thereto.

CUPHOTES.

Spheniscus, Kirby, Trans. Linn. Soc. xii. p. 421 (1818); Lacordaire, Gen. Col. v. p. 480 (1859); J. Thomson, Monogr. in Arcana Natura, p. 101 (1859), & Physis, ii. p. 130 (1867) (nomen præocc.).

Twenty-eight species of this Tropical-American genus are enumerated in Gemminger and Harold's Catalogue (vii. pp. 2026 & 2027); at least one fourth of these names, however, do not represent distinct species but varieties, or are referable to *Pœcilesthus* as here understood. Too much importance has in several cases (as in *Strongylium*) been attached to colour differences, not only of the elytra but of the thorax and femora, as a specific character—these differences being subject to variation in a long series of examples. The punctuation of the thorax also varies in intensity in some species, though not so much as in *Strongylium*. *Cuphotes* is represented in our region by six species, one or two of which have a wide range.

Certain species very closely resemble in colour and appearance some of the Erotylidæ inhabiting the same districts, and in company with which they are often to be found.

The name *Spheniscus* having been long preoccupied for a well-known genus of Aves (Brisson, 1760) I am compelled to substitute another.

1. *The underside of the femora, the middle of the metasternum behind, and the last ventral segment, thickly clothed with short silky hair, in the male.*

1. Cuphotes corallifer.

Spheniscus corallifer, J. Thoms. Arcana Nat. p. 108, t. 10. f. 8[1].

Hab. Panama, Volcan de Chiriqui (*Champion*).—Colombia[1].

A single immature individual captured by myself in Chiriqui seems referable to this species. This example has the elytral fossæ arranged in longitudinal rows, a character not mentioned by Thomson nor indicated in his figure. Specimens of a closely allied form from Ega, perhaps not really distinct, are labelled in Mr. F. Bates's collection with a MS. name: these differ from our insect in their unicolorous black legs.

2. Cuphotes jansoni. (Tab. XIV. fig. 6, ♀.)

Spheniscus jansoni, F. Bates in litt.

Broad, very convex, black, shining. Head closely and irregularly, the vertex very sparingly and finely, punctured, longitudinally impressed in the middle between the eyes; prothorax strongly transverse, the apex deeply arcuate-emarginate, the base bisinuate, the anterior angles strongly produced and narrowly rounded, the sides narrowing almost from the base and nearly straight, the disc with a very deep irregular impression on each side a little behind the middle and a shallow transverse one in the centre before the base, the surface finely and sparingly punctured; elytra very convex (scarcely gibbous), the disc gradually rounded off behind, the surface with scattered irregular rounded fossæ, yellowish-testaceous, with the base and suture very narrowly, a common median transverse band (more or less angulated on its upper and lower edges) extending to the lateral margins, the apex rather broadly, and the fossæ, black, the interstices smooth; beneath and the legs black, shining, finely and rather sparingly punctured. Length 18½–21 millim.; breadth 9½–11¼ millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt*, *Janson*).

Numerous examples, varying only in the width of the median band of the elytra. This insect is allied to *C. sphacelata* (Fabr.) (= *adelpha*, Thoms.); but is separated by the elytra being more regularly convex and not gibbous (the posterior half of the disc rounded off and not abruptly declivous), with smaller, more rounded, and more scattered fossæ, &c. A more nearly allied undescribed species from Chanchamayo, Peru, is contained in Mr. F. Bates's collection.

3. Cuphotes nigro-maculata.

Spheniscus nigro-maculatus, J. Thoms. Arcana Nat. p. 110, t. 11. f. 4[1]; Dej. Cat. 3rd edit. p. 229[2].

Hab. Mexico[2] (*Sallé*[1]), Tutepec[1], Misantla, Jalapa (*Höge*); Nicaragua, Chontales

(*Janson*); Costa Rica (*coll. F. Bates*), Cache, Volcan de Irazu (*Rogers*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

var.

Spheniscus marginicollis, J. Thoms. Arcana Nat. p. 110, t. 11. f. 5[1]; Dej. Cat. 3rd edit. p. 229[2].

Hab. Mexico[1 2], Cordova (*Sallé, Höge*); Guatemala, Chacoj in Vera Paz (*Champion*).

The long series of specimens before me connect *C. marginicollis* with *C. nigro-maculata*: I am quite unable to detect any difference except colour*. The insect varies considerably in the intensity of the maculation of the elytra, the spots sometimes coalescing on the disc and forming a common transverse band. In the variety (in addition to the sides of the thorax being more or less broadly marked with red) the elytral spots are much larger, more scattered, and fewer in number; intermediate examples are, however, found in Mexico. *C. marginicollis* seems not to extend south of Guatemala, while *C. nigro-maculata* appears to be widely distributed. The specimens before me vary in length from 13–21½ millim., and in breadth from 6–11 millim.

4. **Cuphotes unicolor.** (Tab. XIV. fig. 7, ♂.)

Spheniscus unicolor, F. Bates in litt.

Rather short, very convex, unicolorous reddish-testaceous, the eyes, oral organs, antennæ, the apical third of the femora, the tibiæ, and tarsi, piceous or black, shining. Head almost smooth, the epistoma alone finely and sparingly punctured, shallowly longitudinally impressed between the widely separated eyes; antennæ with the penultimate joints about as long as broad; prothorax strongly transverse, the apex feebly arcuate-emarginate, the base strongly bisinuate and somewhat deeply impressed within in the middle and on each side, the anterior angles rounded and not prominent, the sides slightly rounded and narrowing from a little before the base, the surface smooth and (except at the base) unimpressed; elytra broad, rather short, very convex (scarcely gibbous), the disc gradually rounded off behind, very finely and lightly striate-punctate, the interstices sparingly and very minutely punctured; legs comparatively long and slender, the intermediate and hind tarsi long; beneath finely and sparingly punctured, the metasternum almost smooth, sparingly pubescent, the middle of the metasternum thickly clothed with hair in the male.

Length 15–17 millim.; breadth 8–10 millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt, Janson*).

Numerous examples. This insect has no near known ally.

2. *The underside of the femora thickly (the middle of the metasternum almost glabrous, as in the female), and the apex of the last ventral segment sparingly, clothed with hair, in the male.*

5. **Cuphotes cincta.**

Helops cinctus, Oliv. Ent. iii. 58, p. 13, t. 2. f. 6[1]; Lac. Gen. Col. v. p. 481, nota 2[2]; J. Thoms. Arcana Nat. p. 111[3].

* Thomson (*op. cit.*) describes the elytra as "gibbous" in *C. nigro-maculata* and "very convex" in *C. marginicollis*: the examples before me bridge over these differences.

Spheniscus cruciatus, Dej. Cat. 3rd edit. p. 229[4].
Spheniscus 4-maculatus, Erichs. Consp. Col. Peruan. in Archiv für Naturg. 1847, part 1, p. 120[5]; J. Thoms. Arcana Nat. p. 111, t. 11. f. 6[6].
Spheniscus 4-plagiatus, Kirsch, Berl. ent. Zeitschr. 1866, p. 202[7].

Hab. NICARAGUA, Chontales (*Belt, Janson*); PANAMA (*coll. F. Bates*), Bugaba, Volcan de Chiriqui (*Champion*).—COLOMBIA, Bogota[7]; GUIANA, Cayenne[1 2 3 4]; BRAZIL[2]; PERU[5 6]; BOLIVIA.

An extremely variable insect. The very long series of Central-American examples before me nearly all belong to the typical form, in which the elytra have a common broad median transverse band and the suture narrowly black; some few specimens have the suture only black.

The variety described by Erichson[5] as *quadrimaculatus* [the insect figured by Thomson under this name (*op. cit.*) does not agree with Erichson's description] and by Kirsch[7] as *quadriplagiatus* has the elytra black, with a large spot at the shoulders and another at the apex testaceous or fulvous: this form I have not yet seen from our country. *C. cincta* is very abundant throughout the forest-region of Tropical America and extends as far north as Nicaragua. In some of the more southern localities all the numerous varieties have been collected together. *Pœcilesthus fasciatus* (Fabr.) is erroneously given as a synonym of this species by Thomson.

6. Cuphotes elongata.

Spheniscus elongatus, J. Thoms. Arcana Nat. p. 112[1].

Hab. NICARAGUA, Chontales (*Belt*).—BRAZIL[1].

A single female example from Chontales agrees with the description of this insect. *C. elongata* is one of three allied species described by Thomson, and known from the others of the genus by the large and narrowly separated eyes, the deeply impressed thorax, and the peculiar sculpture of the elytra. In the elytral maculation this insect exactly resembles the typical form of *Pœcilesthus nigro-punctatus*; it is, however, at once separated from that species by the thorax not being margined at the sides, and by the elytral spots being somewhat depressed and punctured all over.

PŒCILESTHUS.

Pœcilesthus, Blanchard, Hist. Nat. Ins. ii. p. 33 (1845); Lacordaire, Gen. Col. v. p. 483 (1859); Mäklin, Œfv. Finsk. Vetensk.-Soc. Förh. xx. p. 64 (1878).
? *Spheniscus*, Castelnau, Hist. Nat. Ins. Col. ii. p. 232 (1840)*.

This Tropical-American genus contains about thirty-five described species, and very

* *Spheniscus kirbyi*, Cast. (*loc. cit.*), from Brazil, from the description, would seem to be a species allied to *Pœcilesthus pictus* (Guér.), and not a variety of *S. erotyloides*, Kirby, as supposed by Lacordaire; the definition "corselet rebordé" and the elytral sculpture appear to indicate an ally of *P. pictus*.

many others exist in collections. I have to enumerate nine species from Central America. *P. nigro-punctatus* (and *P. pictus*, Guér.) very closely resembles *Cuphotes elongata*, *C. maculosa* (Thoms.), &c., and except for the laterally margined thorax would seem better included in that genus; our other species have a very different facies. *Pœcilesthus*, however, like *Strongylium*, contains a very heterogeneous assemblage of species, comparatively few of which inhabit our region, and will doubtless have eventually to be subdivided; all the species here referred to it have the sides of the thorax completely margined. In *P. nigro-punctatus* the under surface is slightly pubescent; and, as in some species of *Cuphotes*, the middle of the metasternum, the underside of the femora, and the last ventral segment are somewhat thickly clothed with hair in the male; in our other species the under surface in both sexes is almost entirely glabrous. The anterior tibiæ are often strongly curved and sinuous and clothed with short hair within in the male; usually slightly curved in the female.

1. **Pœcilesthus nigro-punctatus.** (Tab. XIV. fig. 8, ♂.)

Spheniscus nigropunctatus, Chevr. in litt.; Gemm. & Har. Cat. vii. p. 2028[1].
Spheniscus irroratus, Reiche in litt.

Oblong ovate, moderately convex, black, shining. Head closely and finely punctured, the intraocular space and the vertex much more sparingly so, shallowly longitudinally impressed between the eyes; antennæ short, slightly passing the base of the prothorax, much widened outwardly, joint 3 much longer than 4, joints 5–7 subtriangular, scarcely differing in length, each much wider than its predecessor, 8–11 broad, wider than 7, transverse, 9 and 10 very strongly so, entirely black; prothorax strongly transverse, moderately convex, the base feebly sinuate, the apex shallowly arcuate-emarginate, the sides feebly but distinctly margined, narrowing rather rapidly from the base, nearly straight, a little rounded in front, the anterior angles rounded and slightly produced, the hind angles subacute, the basal foveæ very deep, the disc slightly impressed in the middle before the base, the surface very finely and sparingly punctured; scutellum triangular, black; elytra rather long, moderately convex, the sides nearly straight in their basal half, widest a little behind the middle, the shoulders scarcely impressed within, light yellowish-testaceous, with numerous irregularly scattered rounded or oblong black or bluish-black spots, the base (narrowly) and the apex (usually) more or less marked with black, the spots each surrounded by a line of punctures and the interspaces with tortuous lines of rather coarse impressions, the rest of the surface closely and minutely punctured, the extreme base only with longitudinal rows of impressions; beneath (and the epipleuræ) black, slightly pubescent, sparingly punctured, the ventral surface more closely so; the metasternum in the middle and the under surface of the femora thickly clothed with short hair, and the last two ventral segments with longer and darker hair, in the male, the sixth (or hidden) ventral segment very deeply excised in the middle in this sex; legs comparatively short and stout, black, the anterior and intermediate tibiæ longer and more curved in the male.

Length 11–17 millim.; breadth 5–8 millim. (♂ ♀.)

Hab. ? Mexico[1] (*coll. F. Bates*); Panama (*coll. F. Bates*), Bugaba, Volcan de Chiriqui (*Champion*).—Colombia; Venezuela; Brazil.

Var. α. The sides of the prothorax broadly, and the basal half of the femora, red; the elytra marked as in the type.

Hab. Venezuela (*coll. F. Bates*). One example.

Var. β. The elytra with a common black transverse median band extending to the lateral margins, the base and apex often more or less marked with black. (*Spheniscus lecontei*, Dej. Cat. 3rd edit. p. 229 [2].)

Hab. COLOMBIA [2]; BRAZIL [2].

A common species in the southern parts of our region and extending southwards to Brazil, and well known in collections under the name of *P. nigro-punctatus* (Chevr.). South-American examples with a black median band to the elytra differ only in colour from our insect: with the large amount of material before me I can only treat them as a variety of *P. nigro-punctatus*. Chiriqui specimens have the elytra testaceous at the extreme base; those from Panama have the base narrowly (and the apex rather broadly) marked with black. In Southern Colombia and elsewhere in Tropical South America the banded and unbanded forms inhabit the same localities. *P. nigro-punctatus* is closely allied to *P. pictus* (Guér.) of Tropical South America; but differs in having the elytra more regularly but more feebly convex (not subgibbous towards the base as in that species), more finely punctured (the tortuous lines of impressions not so deeply impressed), and more regularly spotted with black (especially on the posterior half); the anterior angles of the thorax less produced, &c.; both species have the elytra testaceous, with irregularly scattered black spots, each of the black spots surrounded by a line of punctures, the spots thus appearing slightly raised. The locality Mexico [1] would seem to require confirmation. A Chiriqui specimen is figured.

2. **Pœcilesthus variipes.** (Tab. XIV. fig. 9, ♂.)

Oblong ovate, feebly convex, reddish-testaceous, shining. Head deeply excavate in front, longitudinally impressed in the middle between the eyes, the intraocular space rather narrow, closely and coarsely punctured, the eyes darker in tint; antennæ dark violaceous, about reaching to the first third of the elytra, rather stout, joint 4 much longer than 3, joints 4–10 subtriangular (the inner apical angles of each angularly extended), decreasing a little in length outwardly, 7–9 the widest, the apical joint oblong and narrower than the tenth: prothorax rather broader than long, moderately convex, the base and apex nearly straight, the sides completely but not strongly margined, subangularly extended in the middle and rather abruptly emarginate before and behind this, and narrowing anteriorly, the anterior angles deflexed and rounded, the hind angles subrectangular, the base deeply grooved within between the foveæ, the surface rather uneven, very irregularly, somewhat sparingly, but rather coarsely punctured, a narrow longitudinal space on the middle of the disc impunctate; scutellum finely and sparingly punctured; elytra long, subparallel in their basal half, the base shallowly impressed within, deeply and somewhat coarsely punctate-striate, the striæ here and there irregularly interrupted on the disc towards the base, the interstices feebly convex and sparingly but quite distinctly punctured; beneath almost glabrous, the fifth ventral segment clothed with short hairs, the prosternum, the sides of the meso- and of the metasternum and side-pieces, and the flanks of the prothorax, rather coarsely punctured, the ventral surface very finely and very sparingly so, the rest of the surface nearly smooth; legs long and slender, testaceous, the apices of the femora and the tibiæ and tarsi violaceous; anterior tibiæ in the male slightly curved and with the inner margin somewhat thickly clothed with hair.

Length 11 millim.; breadth 4¾ millim. (♂.)

Hab. NICARAGUA, Chontales (*Belt*).

One example. *P. variipes* is separated from its allies by the comparatively long and uneven thorax, the deeply striate elytra, the structure and colour of the antennæ, and

the peculiarly-coloured legs. In size and colour this insect approaches *P. angulicollis*, Mäkl., and *P. testaceus*, Kirsch.

3. **Pœcilesthus fragilicornis.** (Tab. XIV. fig. 11, ♀.)

Oblong, moderately convex, testaceous or fusco-testaceous, shining. Head piceous or black, the anterior half and the oral organs more or less testaceous, finely and rather sparingly punctured, the vertex longitudinally impressed; antennæ long (nearly reaching to the middle of the elytra) and very slender, not widening outwardly, the joints very little wider at their apex than at their base, 8–11 about equal in length, 1–4 fusco-testaceous, 5–7 or 5–8 more or less piceous, 8–11 or 9–11 light testaceous; prothorax strongly transverse, rather convex, the base and apex nearly straight, the sides subangularly extended in the middle, narrowing anteriorly, and rather abruptly sinuate before the obliquely cut off obtuse anterior angles, the hind angles subrectangular, the base deeply impressed within, the basal foveæ deep, the surface shallowly and sparingly but very distinctly punctured; scutellum testaceous, sparingly punctured; elytra long, subparallel to beyond the middle, the shoulders rather deeply impressed within, shallowly punctate-striate, the interstices sparingly and minutely punctured, the basal fifth and a broad transverse band a little beyond the middle, black, the black markings not quite extending to the suture; beneath almost smooth, testaceous, the sides of the metasternum broadly and the side-pieces black; legs long and very slender, testaceous, the tibiæ and tarsi more or less stained with fuscous; anterior tibiæ in the male slightly curved and with the inner margin somewhat thickly clothed with hair.

Var. α. Elytra with the black basal spot much smaller (not extending to the sides and distant from the suture), and with rather more than the apical half black. (Tab. XIV. fig. 12, ♂.)

Var. β. Above and beneath testaceous, the elytra each with a small transverse piceous spot placed a little behind the middle.

Length $8\frac{1}{2}$–11 millim.; breadth $3\frac{1}{3}$–$4\frac{1}{2}$ millim. (♂ ♀.)

Hab. Costa Rica (*coll. Gorham*); Panama, Bugaba (*Champion*).

Eight examples. This insect is distinguished by its very slender legs and antennæ. The different varieties were collected together at Bugaba.

4. **Pœcilesthus latus.**

Broad ovate, short, feebly convex, testaceous, shining. Head very finely and sparingly punctured, the vertex unimpressed, the eyes a little darker and widely separated; antennæ long and slender, gradually widening outwardly (the last four joints missing), joints 4–7 slightly stained with piceous on their outer edge; prothorax strongly transverse, feebly convex, the base slightly bisinuate, the apex nearly straight, the sides feebly subangularly extended in the middle and narrowing a little in front, the anterior angles broadly rounded, the disc transversely impressed in the middle just in front of the basal margin, the basal foveæ deep, the surface very sparingly, finely, and shallowly punctured; scutellum almost smooth; elytra comparatively broad, short, somewhat depressed, finely and lightly striate-punctate, the interstices broad, quite flat, and very minutely punctured; beneath almost smooth; legs rather slender, the inner edges of the tibiæ and the knees stained with fuscous, the tarsi piceous; the anterior tibiæ (in the female) slightly curved.

Length 11 millim.; breadth $5\frac{1}{2}$ millim. (♀.)

Hab. Nicaragua, Chontales (*Janson*).

A single specimen. This immature-looking insect somewhat resembles the pallid form of *P. fragilicornis*, but is much broader; the elytra are shorter and broader, very lightly striate-punctate, and with the interstices perfectly flat; the head is smoother and has the vertex unimpressed, &c. The anterior tibiæ are almost as strongly curved as in the opposite sex of the allied species.

5. Pœcilesthus guatemalensis.

Oblong ovate, rather convex, bright reddish-testaceous. Head coarsely and rather closely punctured, the anterior half much smoother, shallowly longitudinally impressed between the eyes; antennæ rather short, widening outwardly, joint 6 the length of but much wider than 5, subtriangular, joints 7–10 decreasing slightly in length, wider than 6, 7 and 8 about as long as broad, the apical joint longer and narrower than the tenth, joints 1–5 and the extreme apex testaceous, the rest black; prothorax short, convex, strongly transverse, the sides a little rounded about the middle and narrowing anteriorly, the base and apex nearly straight, the anterior angles rounded, the basal foveæ very shallow, the surface coarsely and rather closely punctured; scutellum depressed in the middle; elytra moderately long, rather convex, subparallel in their basal half, shallowly striate-punctate, the interstices perfectly flat and each with about three rows of rather coarse punctures (the punctures nearly as coarse as those of the striæ); beneath almost smooth, the flanks of the prothorax somewhat coarsely punctured; legs slender, unicolorous, testaceous; anterior tibiæ in the male curved and sinuous, a little widened on the inner side towards the base, and with the inner margin clothed with short hairs.

Length 6½ millim.; breadth 2½ millim. (♂.)

Hab. Guatemala, Teleman (*Champion*).

A single male example captured by myself in the Polochic valley. An obscure species, though abundantly distinct from any other of the genus known to me.

6. Pœcilesthus laticollis. (Tab. XIV. fig. 10, ♀.)

Oblong ovate, moderately convex, testaceous or fusco-testaceous, shining. Head very finely and sparingly punctured, in one or two examples almost smooth, the vertex nearly or quite unimpressed, the eyes more or less piceous in tint; antennæ (♀) comparatively short, widening outwardly, joints 6–8 subtriangular, 8–10 equal in width but decreasing in length, the apical joint longer and rather narrower than the tenth, testaceous, joints 4–6 more or less stained with fuscous, 8–11 black, the extreme apex of the eleventh testaceous; prothorax exceedingly short, twice as broad as long, slightly convex, very strongly margined, the base feebly bisinuate, the apex nearly straight, the sides feebly emarginate about the middle and slightly narrowing in front, the anterior angles broadly rounded, the base deeply impressed within between the foveæ, the surface very sparingly, shallowly, and finely punctured, much more coarsely so on the basal portion of the disc, the basal half of the disc and the margins usually stained with piceous; scutellum more or less stained with fuscous or piceous, sparingly punctured; elytra moderately long, feebly convex, subparallel in their basal half, rather deeply punctate-striate, the interstices feebly convex and finely and sparingly punctured, the shoulders, a rather large patch on the disc (sometimes represented by a short oblong streak on the second and fourth interstices) of each near the base, a transverse band of longitudinal streaks about the middle (these streaks placed on the alternate interstices from the second to the eighth, that on the second being very much the longest), a streak on the second interstice near the apex, and a triangular patch at the point of junction of the third and sixth striæ, piceous or black; beneath almost smooth, the sides of the meso- and of the metasternum and side-pieces, and the epipleuræ, sometimes stained with piceous; legs moderately long, the apices of the femora, the tibiæ and tarsi more or less stained with fuscous.

Length 6¾–8 millim.; breadth 2⅔–3½ millim. (♀.)

Hab. Mexico, Cordova (*Sallé*), Tapachula in Chiapas (*Höge*); Guatemala, Zapote (*Champion*).

Var. The elytral markings obliterated, the rest as in the type.

Hab. Guatemala, Zapote (*Champion*).

Six female examples. This species is allied to *P. decem-signatus*, Mäkl., and some undescribed forms from Tropical South America. The exceedingly short, broad, and

comparatively strongly margined thorax readily distinguishes this insect from all others inhabiting our region. The single example from Cordova has the longitudinal streaks on the elytra much more interrupted and somewhat differently arranged. A female typical example from Zapote is figured.

7. **Pœcilesthus immaculatus.** (Tab. XIV. fig. 13, ♂.)

Oblong ovate, rather convex, red or fusco-testaceous in tint, shining. Head almost smooth, unimpressed between the eyes; antennæ moderately long, gradually widening outwardly, joints 8–10 about equal in width, longer than broad, and very slightly decreasing in length, the apical joint the width of but rather longer than the tenth, black, the basal two joints and the extreme apex testaceous; prothorax strongly transverse, feebly convex, the base slightly bisinuate, the apex nearly straight, the sides subangularly extended about the middle, narrowing in front, and somewhat abruptly emarginate before the obtuse anterior angles, the basal foveæ shallow, the surface shallowly, finely, and very sparingly punctured; scutellum smooth, piceous or black; elytra moderately convex, comparatively short, subparallel in their basal half, deeply and rather coarsely punctate-striate, the interstices very slightly convex and very sparingly and minutely punctured; beneath smooth, impunctate; legs rather long, the apices of the femora, and the tibiæ and tarsi, stained with piceous; anterior tibiæ in the male slightly curved and with the inner margin clothed with short scattered hairs.

Length 6–8 millim.; breadth 3–3⅔ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

The two examples differ a little *inter se*, but I have no doubt they are the sexes of the same species. The male is bright red in tint, and has only the outer edges of the tibiæ piceous, and the sides of the thorax more deeply emarginate in front than in the female; the latter is of a fusco-testaceous colour, and has the tibiæ entirely piceous; both have the scutellum dark.

8. **Pœcilesthus læviceps.** (Tab. XIV. fig. 14, ♀.)

Oblong ovate, moderately convex, testaceous, shining. Head smooth, deeply longitudinally impressed in the middle between the eyes; antennæ moderately long, gradually widening outwardly, joints 8–10 equal in width but decreasing in length, the apical joint the length of the eighth, joints 7–11 piceous, the extreme apex of the eleventh and the basal six fusco-testaceous; prothorax strongly transverse, comparatively convex, the base feebly bisinuate, the apex almost straight, the sides a little extended about the middle, narrowing anteriorly, rather abruptly emarginate before the deflexed and rounded anterior angles, and slightly sinuate behind, the entire base deeply grooved within, the surface very sparingly and shallowly punctured; scutellum testaceous, smooth; elytra moderately convex, comparatively short, subparallel in their basal half, shallowly and rather finely punctate-striate, the interstices slightly convex and finely and somewhat closely punctured, a narrow curved transverse band a little below the shoulders (extending upwards on the second and third interstices, but not reaching the lateral margins), a subangular rather broad common transverse median band (extending triangularly forwards along the suture but not reaching the lateral margins), and a transverse patch on the disc of each midway between this and the apex, fusco-piceous; beneath smooth, impunctate, the epipleuræ and the sides of the meso- and of the metasternum and side-pieces stained with fusco-piceous; legs comparatively rather short, the apices of the femora and the tibiæ and tarsi stained with piceous.

Length 7⅓ millim.; breadth 3 millim. (♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

One example. This insect is allied to *P. immaculatus*; it is, however, readily sepa-

rated by the impressed head, more convex thorax, testaceous scutellum, much finer and more lightly impressed elytral striæ, slightly convex and closely punctured interstices, shorter legs, &c.; and also by the maculation of the elytra.

9. **Pœcilesthus mäklini.** (Tab. XIV. fig. 15, ♂.)

Oblong ovate, moderately convex, testaceous, shining. Head very sparingly and minutely punctured, the vertex unimpressed; antennæ moderately long, gradually widening outwardly, joints 5–10 subtriangular, much longer than broad, almost equal in length, the apical joint ovate and as long as but rather narrower than the tenth, joints 7–11 black, the basal halves of 4–6 stained with piceous, the rest (and the extreme apex of the eleventh) testaceous or fusco-testaceous; prothorax strongly transverse, moderately convex, the base feebly bisinuate, the apex nearly straight, the sides feebly rounded and but little narrowing in front, the anterior angles rounded, the base deeply grooved within in the middle, the basal foveæ moderately deep, the surface sparingly but very distinctly punctured on the disc, obsoletely so towards the sides, the middle of the base slightly stained with piceous; scutellum smooth, piceous; elytra comparatively rather short, moderately convex, subparallel in their basal half, rather shallowly punctate-striate, the interstices flat and rather closely but very minutely punctured, the suture (except at the apex) and a longitudinal patch (placed about the middle and extending from the third to the eighth interstices) on the disc of each piceous; beneath smooth, impunctate, the epipleuræ stained with piceous; legs rather long and slender, the apices of the femora and the outer edges of the tibiæ stained with fuscous, the tarsi with piceous; anterior tibiæ in the male strongly curved (the intermediate pair also but not so distinctly), and with the inner margin thickly clothed with hair.

Length $7\frac{1}{3}$ millim.; breadth 3 millim. (♂.)

Hab. GUATEMALA, San Juan in Vera Paz 2000 feet (*Champion*).

A single example of this distinct species was captured by myself on the forest-clad mountain-slope north of the Polochic valley. *P. mäklini* is perhaps nearest allied to *P. immaculatus*; it is separated from that species by the thorax being more rounded at the sides and less narrowed in front; the elytral striæ finer and not so deeply impressed, and the interstices quite flat; and also by the elytra being maculated.

STRONGYLIUM.

Strongylium, Kirby, Trans. Linn. Soc. xii. p. 417 (1818); Lacordaire, Gen. Col. v. p. 484 (1859); Mäklin, Monogr. 1864, p. 109; Acta Soc. Fennicæ, viii. part 1, p. 225 (1867).

Stenochia, Kirby, l. c. p. 423 (1818).

Pœcilesthus, Dejean, Cat. 3rd edit. p. 229 (1837) (pars).

Sœrangodes, Dejean, Cat. l. c.

Gentinadis, Castelnau, Hist. Nat. Col. ii. p. 240 (1840).

Mäklin in his monograph of this genus enumerates 266 species, of which 189 are from the New World; the 189 New-World species are apportioned thus:—North America 3, Mexico and Central America 36, South America 145, and the Antilles 5. Since that time (1864) 39 additional species have been recorded, 5 only of which are from the New World, viz. 2 from Florida, and 3 from Tropical South America.

A large number of undescribed forms, however, exist in collections, and the total

number of species cannot be less than 400, a very large proportion of which inhabit Tropical South America.

We have now to record 67 from Central America, the majority of the new species being, as might be expected, from the southern part of our region.

All the species here referred to it have the third joint of the antennæ longer than the fourth, or the third and fourth joints subequal. The first joint of the posterior tarsi varies very much in length, the eyes are sometimes very large and approximate, sometimes quite small and widely separated, and generally largest in the male, and the usually hidden and more or less corneous sixth ventral segment is sometimes visible, in the different species. The males often have the anterior tibiæ more curved, or slightly sinuate, and more evidently pilose within than in the female, and the fifth ventral segment impressed (sometimes in the female also) in the middle behind; in some species (e. g. *S. maculicolle*) the metasternum is somewhat thickly clothed with short decumbent hair (as in certain *Cuphotes*) in this sex.

A. *Form broad, oblong ovate, comparatively short (resembling* Pœcilesthus*); eyes small; upper surface comparatively very smooth and shining. Elytra regularly convex, very finely and lightly striate-punctate, with the interstices quite flat; testaceous or red, sometimes maculated.*

* *Prothorax with the sides feebly margined towards the base.*

1. **Strongylium maculicolle.** (Tab. XIV. fig. 16, ♂.)

Oblong ovate, comparatively broad, moderately convex, reddish-testaceous, shining. Head sparingly but deeply and somewhat coarsely, the epistoma much more closely, punctured; the intraocular space with a smooth longitudinal, slightly impressed, space down the middle; the eyes small and widely separated; the oral organs, the epistoma in the middle, the sides behind the eyes, and, rarely, the extreme base piceous or black; antennæ moderately long, very slightly widening outwardly, joints 3 and 4 long, subequal, 5–10 gradually decreasing in length, much longer than broad, the apical joint ovate, and rather longer than the tenth, black; prothorax strongly transverse, moderately convex, the base feebly bisinuate, the apex very slightly emarginate on each side behind the eyes, the sides very feebly but distinctly margined at the base, and obsoletely so at the apex, narrowing from the base, and slightly sinuous about the middle, the anterior angles rounded and rather prominent, the hind angles subacute, the basal foveæ deep, the disc impressed in the middle at the base, and often obsoletely canaliculate in front, the surface finely and sparingly (but deeply) punctured, with a more or less broad black stripe (usually narrowing towards the middle, and leaving a large triangular patch in front) on the disc, this stripe connected along the base with a large triangular black patch occupying the hind angles; scutellum large, scutiform, sparingly punctured, piceous or black; elytra comparatively broad and short, widest a little behind the middle, subparallel in their basal half, finely striate-punctate, the interstices perfectly flat and closely and very distinctly punctured, the surface stramineous in colour, and of a much lighter tint than the prothorax, each with three rather large spots placed transversely before, and three other smaller spots (sometimes confluent, sometimes very small) placed transversely behind, the middle, fuscous or black; beneath reddish-testaceous, the flanks of the prothorax and the sides of the meso- and of the metasternum and side-pieces more or less stained with piceous or black, moderately closely punctured, sparingly pubescent; the metasternum in the middle, and the inner side of the curved anterior tibiæ from the middle to the apex, somewhat thickly clothed with hair in the male; legs rather long, the first joint of the posterior tarsi very long, black or piceous, the basal half of the femora reddish-testaceous.

Var. The elytra with the outer two spots of the first band confluent, and the three spots of the second band united into one large spot.

Length 10–15 millim.; breadth 5–6½ millim. (♂ ♀.)

Hab. NICARAGUA (*Sallé*), Chontales (*Belt, Janson*); COSTA RICA (*Sallé*); PANAMA, Bugaba, Volcan de Chiriqui 3000 feet (*Champion*).

Many examples. All the Nicaraguan examples belong to the variety, but in Chiriqui both forms were collected together. A very distinct species, resembling in its general facies and elytral maculation certain forms of *Pœcilesthus*; in the structure of the thorax this insect is almost intermediate between that genus and *Strongylium*. The legs scarcely vary in colour.

A typical example from Chiriqui is figured.

** *Prothorax with the sides immarginate.*

2. **Strongylium höpfneri.** (Tab. XIV. figg. 17, ♂; 18, ♂, var. *pectorale.*)

Strongylium hœpfneri, Mäkl. Monogr. p. 124; Act. Soc. Fenn. viii. part 1, p. 232[1].
Pœcilesthus höpfneri, Dej. Cat. 3rd edit. p. 229[2].
Pœcilesthus rufipennis, Dej. Cat. l. c.[3].

Var. α. Head and thorax rufo-testaceous, the legs black; the fourth and fifth ventral segments red.
Strongylium scutellare, Mäkl. Monogr. p. 125; Act. Soc. Fenn. viii. part 1, p. 233[4].

Var. β. Head and prothorax rufo-testaceous, the basal three fourths of the femora red; beneath in greater part red.
Strongylium pectorale, Mäkl. Monogr. p. 125; Act. Soc. Fenn. viii. part 1, p. 233[5].
Strongylium lucidum, Deyr. in litt.

Var. γ. Upper surface fusco-piceous; beneath (except the fifth ventral segment) and the legs black.
Strongylium immundum, Mäkl. Monogr. p. 126; Act. Soc. Fenn. viii. part 1, p. 234[6].

Var. δ. Above and beneath coloured as in the type (black, the elytra and the fourth and fifth ventral segments red), the elytral interstices almost impunctate.
Strongylium chevrolatii, Mäkl. Monogr. p. 127; Act. Soc. Fenn. viii. part 1, p. 235[7].
Pœcilesthus chevrolatii, Dej. Cat. 3rd edit. p. 229[8].

Hab. MEXICO[1 2 3 4 5 6 7 8], Cordova, San Andres Tuxtla, Playa Vicente (*Sallé*), Misantla, Mirador (*Höge*); GUATEMALA, Senahu, Teleman, Panima, Sinanja, Chacoj, and San Juan in Vera Paz (*Champion*).

I can detect nothing of importance in Mäklin's descriptions, which were no doubt based upon very insufficient material, of these five so-called species, beyond colour and some slight difference in the punctuation of the elytral interstices. The very large amount of material before me connects the numerous varieties, most of which occur together in the same localities, not only in Mexico but in Guatemala also. The head, thorax, antennæ, legs, and under surface vary very much in colour; but the elytra are usually red, and the scutellum is always piceous or black. The var. γ,

S. immundum, appears to be the rarest (it was described from a single, possibly discoloured example), and I have not seen anything exactly answering to the colour given, the specimen before me with darker elytra having the thorax black.

I met with *S. höpfneri* in abundance at San Juan in Vera Paz; three of its varieties were collected together indiscriminately on charred stumps in a forest clearing.

The localities for this species are all upon the Atlantic slope.

We figure a typical example from Sinanja, and the variety *pectorale* from San Juan.

3. **Strongylium chontalense.** (Tab. XIV. fig. 19, ♀.)

Oblong ovate, rather convex, reddish-testaceous, slightly tinged with fuscous, shining. Head rather coarsely but sparingly punctured, longitudinally impressed between the eyes, the latter feebly convex and somewhat widely separated; antennæ (♀) rather short, rapidly widening outwardly, joints 3 and 4 moderately long, subequal, 5–7 nearly equal in length, and each much shorter than 4, 8 as broad as long, 9 and 10 transverse, joints 1–4 testaceous at the base, blackish-æneous outwardly, the rest dull bluish-black; prothorax rather convex, transverse, the sides immarginate, a little rounded, narrowing from the base, and with a small tubercular prominence in the middle, the base and apex nearly straight and strongly margined, the basal foveæ moderately deep, the anterior angles rounded, the hind angles subrectangular, the surface with very widely scattered fine, but deep, punctures, the disc slightly transversely impressed before the base, the basal and apical margins stained with piceous; scutellum triangular, smooth, piceous; elytra short, convex, subparallel (though a little widening) to beyond the middle, very finely and lightly striate-punctate, obsoletely so towards the apex, the interstices perfectly smooth and flat, light yellowish-testaceous, each with a very large subovate fuscous or piceo-fuscous patch on the disc (the patch not reaching the sutural or lateral margins, and occupying more than half the length of each elytron), the suture narrowly and the epipleuræ piceous; beneath shining, glabrous, almost smooth, the metasternal side-pieces and the flanks of the prothorax sparingly and rather coarsely punctured; legs comparatively short, moderately slender, sparingly punctured, blackish-æneous, the basal half of the femora (and in one example the inner sides of the tibiæ) reddish-testaceous; tarsi rather short, the first joint of the posterior pair shorter than the apical one.

Length 11 millim.; breadth 5 millim. (♀.)

Hab. NICARAGUA, Chontales (*Belt, Janson*).

Two examples, apparently both females. This insect, except for the immarginate sides of the thorax, has much the facies of a *Pœcilesthus*; it will easily be identified from our figure.

B. *Form oblong ovate; eyes small; upper surface dull black with a slight æneous tinge. Elytra abruptly transversely gibbous about the middle, with rows of oblong foveæ.*

4. **Strongylium gibbum.** (Tab. XIV. figg. 20, 20 *a*, ♂.)

Strongylium gibbum, Mäkl. Monogr. p. 144; Act. Soc. Fenn. viii. part 1, p. 252[1].

Hab. MEXICO (*coll. Chevrolat*[1]); GUATEMALA, San Juan in Vera Paz 2000 feet (*Champion*).

A single male example collected by myself in Guatemala agrees so closely with Mäklin's description of *S. gibbum*, that I have little doubt it represents the same species. It differs in having longer and more slender antennæ, and the sides of the

thorax armed with a very small tubercular prominence about the middle. Mäklin's description was probably taken from a female example.

C. *Form narrower, oblong ovate, elongate ovate, or cylindrical; eyes variable in size; upper surface variable.*

Elytra long and convex, with widely scattered rounded or oblong foveæ, testaceous, spotted with black; eyes large; upper surface shining, smooth.

5. **Strongylium sallæi.** (Tab. XIV. fig. 23, ♀.)

Strongylium sallei, Mäkl. Monogr. p. 149; Act. Soc. Fenn. viii. part 1, p. 257, t. 2. f. 17[1].
Strongylium femorale, Chevr. in litt.

Hab. MEXICO[1], Orizaba (*Sallé*); GUATEMALA, San Juan in Vera Paz (*Champion*); NICARAGUA, Chontales (*Belt*).

The two Mexican examples before me have the basal half of the femora red; two others from Guatemala and Nicaragua have the legs entirely black.

Mäklin's figure being a very poor one, we give another from an example from Orizaba.

Elytra short, very coarsely foveolate-striate to the middle and thence to the apex deeply sulcate; prothorax rugosely punctured; eyes small; upper surface dull blackish-bronze.

6. **Strongylium semistriatum.** (Tab. XV. fig. 1, ♂.)

Strongylium semistriatum, Mäkl. Monogr. p. 143; Act. Soc. Fenn. viii. part 1, p. 251[1].

Hab. MEXICO[1], Cordova (*Sallé*).

Elytra moderately long, with rows of oblong foveæ or coarse punctures in their basal half and thence to the apex sulcate; eyes small; upper surface dull blackish-bronze.

7. **Strongylium funestum.**

Strongylium funestum, Mäkl. Monogr. p. 187; Act. Soc. Fenn. viii. part 1, p. 295[1].

Hab. MEXICO[1] (*Sallé, ex coll. Sturm*).

A single example of this species is contained in the Sallé collection.

8. **Strongylium punctifrons.**

Strongylium punctifrons, Mäkl. Monogr. p. 188; Act. Soc. Fenn. viii. part 1, p. 296[1].

Hab. MEXICO[1], Cordova, Playa Vicente, Chiapas (*Sallé*); BRITISH HONDURAS (*Blancaneaux*).

Elytra very coarsely foveolate-striate throughout.

* *Prothorax very coarsely rugosely punctured; eyes large and approximate in the male, smaller in the female; upper surface dull dark bronze, the elytra with a cupreous tint.*

9. **Strongylium excavatum.** (Tab. XV. fig. 2, ♂.)

Strongylium excavatum, Mäkl. Monogr. p. 166; Act. Soc. Fenn. viii. part 1, p. 274[1].
Særangodes excavatus, Dej. Cat. 3rd edit. p. 229[2].
Strongylium cribrosum, Mannerh. in litt.

Hab. Mexico[1 2], Oaxaca (*coll. Mannerh.*), Cordova, Catemaco (*Sallé*); Guatemala, Cubilguitz (*Champion*); Nicaragua, Chontales (*Belt, Janson*).

** *Prothorax coarsely and closely punctured; eyes small; upper surface more shining, greenish-bronze.*

10. **Strongylium canaliculatum.** (Tab. XV. fig. 3, ♀.)

Oblong ovate, rather convex, greenish-æneous, not very shining. Head very coarsely and rugosely punctured, very shallowly impressed between the eyes, the latter small, very feebly convex, and widely separated; antennæ (♀) short, very distinctly widening outwardly, joints 3 and 4 long, subequal, 5–7 subtriangular, 8 about as broad as long, 9 and 10 transverse, 11 longer than 10, short ovate, 1–6 testaceous, much suffused with greenish, the rest dull dark cyaneous; prothorax rather convex, broader than long, the sides immarginate, rounded and narrowing in front, and almost straight or but little narrowed behind, the anterior angles rounded, the hind angles subrectangular, the disc very distinctly and somewhat deeply canaliculate, and with a deep impression on each side immediately above the deep basal fovoæ, the surface very coarsely and closely punctured; scutellum subtriangular, sparingly punctured; elytra comparatively short, moderately convex, a little depressed on the disc, subparallel in their basal half, the surface from the base to the apex with irregular and much interrupted rows of very coarse and deep excavations, the excavations punctiform at the base and there arranged in more regular rows, the interstices irregularly raised and obliquely or transversely confluent, smooth; beneath more shining, greenish-æneous, very slightly pubescent, sparingly but not very finely punctured, the fifth ventral segment and the other segments at the sides more coarsely and closely so, the metasternum at the sides and the flanks of the prothorax very coarsely punctured; legs short, stout, very closely and coarsely punctured, æneous or greenish-æneous, the tarsi cyaneous, the first joint of the posterior tarsi much shorter than the apical joint, the anterior and intermediate tibiæ (in the female) short, curved, and somewhat dilated.

Length 9–10¾ millim.; breadth 3–4 millim. (♀.)

Hab. Mexico (*Sallé*); Guatemala, Teleman (*Champion*).

Three female examples. The stouter and shorter legs, the longer, more distinctly canaliculate, and much more finely punctured thorax, and the shorter and more parallel elytra separate this species from *S. chiriquense*, which it otherwise closely resembles. From *S. excavatum* it is distinguished by its smaller size, the small and widely separated eyes, the punctures of the thorax separate one from another, the excavations of the elytra much more irregular and coarser, the elytra themselves shorter, the much shorter legs, &c. The single example from Mexico is larger, and has the elytral excavations still coarser and deeper and more irregular than in the two Guatemalan specimens; one of the latter is figured.

11. Strongylium crassicorne.

Moderately elongate, rather convex, bright bronze with a slight golden tint. Head (including the vertex) very coarsely and rugulosely punctured, somewhat flattened but not distinctly grooved between the eyes, the latter small and convex and very widely separated; antennæ (♀) short, passing very little beyond the base of the prothorax, stout, rapidly widening outwardly, joint 3 comparatively short, 4 the length of but much wider than 3, subtriangular, 5–10 each wider than 3, broadly subtriangular, 7–10 about as long as broad, 11 broad, rather longer than wide, and bluntly rounded at the apex, 1–3 and the base of 4 and 5 red, the rest dark dull cyaneous; prothorax rather broader than long, convex, the sides immarginate, a little sinuate but not narrowing behind, and rounded and narrowing in front, the apex straight, the base slightly sinuate, the anterior angles rounded, the hind angles subacute, the disc distinctly canaliculate (more deeply so at the base and apex), and with a deep transverse impression on each side a little above the broad very deep basal foveæ, and another very much shallower one on each side a little before the middle, the surface rather uneven, very irregularly, somewhat closely, and very coarsely punctured; scutellum triangular, sparingly punctured; elytra comparatively rather short and convex, subparallel to beyond the middle, the surface from the base to the apex with irregular and much interrupted rows of very coarse and deep excavations, the excavations coarsest and here and there confluent on the middle of the disc, finer and punctiform and arranged in more regular rows at the extreme base, and very shallow (but not placed in grooves) at the apex, the interstices sparingly and minutely punctured; beneath very shining, rich golden-green, glabrous, finely and very sparingly punctured, the sides of the metasternum a little coarsely, the flanks of the prothorax very coarsely, punctured; legs moderately long, the femora and tibiæ rather coarsely punctured, the tarsi rather short and with the first joint of the posterior pair much shorter than the apical one, æneous, the femora towards the base and the tibiæ in great part reddish, the tarsi more or less cyaneous.

Length 12–12½ millim.; breadth 4 millim. (♀.)

Hab. Nicaragua, Chontales (*Belt*, *Janson*).

Three female examples. This insect resembles *S. viridipes* and *S. costaricense*, but it is at once separated by the very short, stout antennæ (in the female), the widely separated, small, and more convex eyes, and other characters noticed above; the elytra are more convex (especially behind) than in *S. costaricense*, and sculptured very much as in that species.

Elytra longer, coarsely and irregularly foveolate-striate, the foveæ more scattered and at the apex here and there longitudinally confluent; eyes rather large; upper surface more shining; prothorax subremotely punctured.

12. Strongylium viridipes. (Tab. XV. fig. 4, ♂.)

Strongylium viridipes, Mäkl. Monogr. p. 166; Act. Soc. Fenn. viii. part 1, p. 274[1].

Sœrangodes viridipes (Chevr.), Dej. Cat. 3rd edit. p. 229[2].

Hab. Mexico[1 2], Cordova (*Sallé*), Tehuacan, Misantla (*Höge*).

An example from Misantla is figured.

Elytra irregularly foveolate-striate and transversely wrinkled to beyond the middle and thence to the apex rather finely punctate-striate, the surface with bright metallic cupreous, green, and golden tints; eyes small.

13. **Strongylium ignitum.** (Tab. XV. fig. 5, ♂.)

Moderately elongate, feebly convex; the head bronzy with the anterior half greenish-æneous; the prothorax brownish-bronze; the elytra in great part fiery-cupreous tinged with violaceous, with a narrow angulated transverse metallic green band (preceded by a narrower golden band) before the middle, another (followed by a narrower golden band) behind the middle, and a third (preceded by a golden band) just before the apex. Head closely and coarsely punctured, longitudinally impressed between the eyes, the latter rather small and widely separated in both sexes; antennæ rather short and stout, a little longer in the male, rapidly widening outwardly in both sexes, joints 3 and 4 rather long, about equal in length, 4 wider than 3, 5–7 subtriangular, 9 and 10 longer than broad in the male, subtransverse in the female, 11 ovate and longer than 10, 1–4 more or less greenish-æneous, 5–11 dull cyaneous, the extreme apex ferruginous; prothorax rather convex, broader than long, the sides immarginate, a little rounded, and slightly narrowing in front, in one example (♀) almost straight behind and the hind angles subrectangular, in the other (♂) sinuous with the hind angles acute, the base bisinuate and rather strongly margined, the apex straight, the basal foveæ deep, the disc deeply transversely impressed before the base and with some irregular transverse or rounded impressions on each side about the middle, the surface coarsely and sparingly punctured; scutellum triangular, smooth, æneous; elytra moderately long, rather depressed on the disc, the sides subparallel to beyond their basal half, but a little compressed before the middle, the base rather deeply transversely impressed just within the somewhat swollen humeri, striate-punctate, the punctures from the base to beyond the middle chiefly in the form of coarse rounded or oblong excavations and thence to the apex (abruptly) fine and oblong in shape, the interstices between the excavations strongly and irregularly wrinkled and thence to the apex nearly flat, almost smooth; beneath bright greenish-æneous, the sides of the metasternum reddish, the fourth and fifth ventral segments entirely (in one example the fifth and the sides only of the fourth) reddish-testaceous, almost glabrous, very sparingly and minutely punctured, the flanks of the prothorax very coarsely so, the sides of the metasternum with scattered coarse impressions; legs short, rather stout, somewhat coarsely punctured, æneous or greenish-æneous, the basal half of the femora and the outer side of the tibiæ more or less reddish, the tarsi cyaneous, the first joint of the posterior tarsi rather shorter than the apical joint; the short anterior tibiæ a little curved (as in the female) and somewhat thickly clothed with hair within, and the fifth ventral segment transversely impressed in the middle behind, in the male.

Length 11 millim.; breadth $3\frac{2}{3}$ millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt*).

Two examples. This vividly-coloured species has no near known ally; it will be easily identified from our figure.

Elytra rather coarsely striate-punctate throughout; prothorax strongly transverse and angulate at the sides; eyes rather small; upper surface bronze, moderately shining.

14. **Strongylium dentatum.**

Elongate, slightly convex, bronze or blackish-bronze, moderately shining. Head short, somewhat coarsely and closely punctured, very shallowly or obsoletely impressed between the eyes, the latter moderate in size and rather widely separated; antennæ (♀) rather stout, moderately long, rapidly widening outwardly, joint 4 about as long as but wider than 3, subtriangular, joints 5–8 almost equal in length, subtriangular, 8 and 9 about as long as broad, 10 subtransverse, 11 ovate, piceous, the basal three joints lighter;

prothorax short, strongly transverse, the sides immarginate, subangularly extended about the middle, and thence to the base and apex obliquely converging, a little more narrowed in front than behind, the apex straight and rather strongly margined, the anterior angles prominent laterally, the base bisinuate and rather strongly margined and with the median lobe somewhat produced, the hind angles subacute, the disc obsoletely canaliculate, transversely impressed in the middle behind, and with a transverse impression on each side immediately above the deep basal foveæ (and in one example confluent with these externally) and another on each side a little before the middle, the surface somewhat coarsely and deeply but rather sparingly punctured; scutellum triangular, nearly smooth; elytra moderately long, subparallel in their basal half, if anything widest a little behind the middle, striate-punctate, the punctures fine on the disc (coarser towards the base), but becoming very much coarser and more irregular and here and there confluent towards the sides, and very much finer and shallower towards the apex, the interstices smooth, nearly flat, scarcely raised at the apex, but a little convex and irregularly wrinkled and here and there transversely confluent towards the sides; beneath bright greenish-æneous or æneous, very slightly pubescent, finely and sparingly punctured, the sides of the metasternum and the flanks of the prothorax coarsely so; legs short, coarsely punctured, brownish-bronze, the basal half of the femora obscure red, the tarsi slightly tinged with cyaneous, the first joint of the hind tarsi shorter than the apical joint.

Length 10–11 millim.; breadth $3\frac{1}{3}$–4 millim. (♀.)

Hab. NICARAGUA (*Sallé*), Chontales (*Belt*).

Two female examples. This species is not closely allied to any other here enumerated; in general facies it much resembles certain forms of *Tarpela*.

Elytra rather broad and convex, with rows of oblong foveæ to the middle, thence to the apex very finely striate-punctate, and with the interstices flat, the apices divergent; eyes small; upper surface very shining, greenish-bronze.

15. **Strongylium tinctipes.** (Tab. XV. fig 6, ♀.)

Elongate, depressed, bright greenish-æneous with slight golden and cupreous tints. Head very closely and somewhat coarsely punctured, the intraocular space usually more coarsely so, longitudinally impressed between the eyes, the latter somewhat strongly transverse and rather widely separated; antennæ (♀) stout, rather short, joints 3 and 4 comparatively short, subequal, 5–8 wider and subtriangular, 9 and 10 subparallel, longer than broad, 11 longer than 10, ovate, 1–5 cyaneous, the rest dull bluish-black: prothorax large and broad, moderately transverse, feebly convex, the sides immarginate, nearly straight behind, narrowing and a little rounded in front, and armed in the middle with a short more or less distinct tooth, the anterior angles rounded, the hind angles rectangular or subacute, the disc very shallowly and indistinctly canaliculate and deeply impressed (in one example only shallowly so) in the middle just before the base (the impression extending obliquely upwards on each side), the basal foveæ shallow, the surface rather uneven and very coarsely (in one example more finely) but somewhat sparingly punctured; scutellum subtriangular, sparingly punctured: elytra long, rather broad, a little depressed, subparallel to beyond the middle, the basal margin on either side of the scutellum somewhat strongly raised, striate-punctate, the punctures on the basal half (on the basal third only near the suture) in the form of coarse deep irregular excavations (the excavations still coarser and deeper outwardly and here and there confluent) and thence (abruptly) to the apex very fine and oblong in shape, the interstices broad and quite flat (except between the excavations) on the disc, very slightly raised at the sides and extreme apex, and very minutely and very sparingly punctured, the suture and base tinged with cupreous, the apices obliquely cut off and almost pointed; beneath glabrous, very bright greenish-æneous, the sides tinged with golden and the fifth ventral segment and the epipleuræ with cyaneous, very finely and sparingly punctured, the sides of the metasternum and the flanks of the prothorax coarsely so; prosternum broad, convexly produced and received by the broadly excavate mesosternum; legs comparatively short and stout, sparingly but coarsely (the femora deeply) punctured, greenish-æneous much tinged with cyaneous, the basal half of the femora

and tibiæ in some examples more or less reddish, the tarsi cyaneous; the first joint of the posterior tarsi very short, not half the length of the apical joint.

Length 14⅓–15 millim.; breadth 5 millim. (♀.)

Hab. NICARAGUA, Chontales (*Belt*); PANAMA, Volcan de Chiriqui 3000 feet (*Champion*), Chiriqui (*Ribbe*).

Four female examples. *S. tinctipes* in general facies and size approaches *S. exaratum*; but is at once separated by the short legs and antennæ, more transverse eyes, much larger thorax, the flat interstices and the somewhat pointed apices of the elytra, &c. The example from Nicaragua differs from the others in having the head and thorax more finely and more closely punctured, the disc of the latter only very shallowly impressed before the base; in other respects it agrees exactly. An allied species from Brazil is contained in Mr. F. Bates's collection.

A Chiriqui specimen is figured.

Elytra rather broad, somewhat depressed, irregularly foveolate-punctate to the middle and thence to the apex sulcate, transversely impressed on the disc before and behind the middle; eyes small; upper surface bright greenish-bronze.

16. **Strongylium exaratum.** (Tab. XV. fig. 7, ♀.)

Elongate, depressed, bright greenish-æneous, sometimes with a slight cupreous tint. Head coarsely, very irregularly, and not very closely punctured, shallowly longitudinally impressed between the eyes, the latter rather small and widely separated in both sexes; antennæ long, in the male reaching to about the first fourth of the elytra, slender, the joints narrow and subparallel, 3 and 4 long, subequal, the penultimate joint fully twice as long as broad, the apical joint much longer than the tenth, joints 1–5 cyaneous, the rest dull black; prothorax rather small, strongly transverse, feebly convex, the sides immarginate, somewhat rounded, and narrowing very little more in front than behind, the apex nearly straight, the base slightly sinuate and strongly margined, the hind angles subrectangular, the anterior angles rounded, the disc very distinctly canaliculate (deeply so towards the apex), and usually with a shallow transverse impression on each side above the deep basal foveæ, the surface coarsely, sparingly, and very irregularly punctured; scutellum triangular, almost smooth; elytra long, rather broad, depressed, subparallel to beyond the middle, the disc shallowly transversely impressed a little before and again a little behind the middle, the scutellar region also a little depressed, striate-punctate, the striæ coarsely punctured at the extreme base, the third to the eighth thence to beyond the middle with coarse irregular excavations (the first and second for the same distance with scattered fine oblong impressions) and much interrupted, and beyond this to the apex all with very fine and shallow oblong punctures, the interstices smooth, irregularly raised towards the sides from a little below the base to the middle and here and there obliquely confluent, and thence to the apex convex, at the apex itself strongly subangularly raised; beneath more shining, greenish-æneous much tinted with golden, very sparingly and minutely punctured, the sides of the metasternum (sparingly) and the flanks of the prothorax coarsely so; legs long, rather slender, the femora sparingly and shallowly, the tibiæ closely and roughly, punctured, greenish-æneous with a slight cyaneous tint, the tarsi bluish-black; the first joint of the posterior tarsi long, as long as the apical joint; anterior and intermediate tibiæ very slightly curved in the male (straight in the female), the anterior tarsi also distinctly dilated and the fifth ventral segment shallowly excavate in the middle behind in this sex.

Length 13–16 millim.; breadth 4–5⅔ millim. (♂ ♀.)

Hab. GUATEMALA, Purula 4000 feet, Panima in Vera Paz (*Champion*).

Numerous examples, all females but two. This species somewhat resembles

S. viridipes, but cannot be satisfactorily compared therewith; it will be readily identified from our figure.

S. exaratum inhabits the humid virgin forest-region of the Guatemalan Atlantic slope.

Elytra a little raised towards the base, finely striate-punctate, subfoveolately so in their anterior half towards the sides, with a depression below the scutellum and two transverse impressions on the disc, the humeri prominent; eyes rather large; upper surface very shining, bright greenish-æneous.

17. **Strongylium fossifrons.** (Tab. XV. fig. 8, ♂.)

Strongylium fossifrons, Mäkl. Monogr. p. 177; Act. Soc. Fenn. viii. part 1, p. 285[1].

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).—Colombia (*coll. Motschulsky*[1]).

Numerous examples of a *Strongylium* collected by myself in Chiriqui agree fairly well with the description of *S. fossifrons*; our specimens appear, however, to have the thorax more sparingly punctured, and to be rather smaller in size, viz. 10½–12 millim. in length (Mäklin gives 13½ millim.); these examples have only the base of the femora red.

Of the species here enumerated *S. fossifrons* can only be satisfactorily compared with *S. exaratum*, from which its smaller size, narrower shape, more brilliantly metallic surface, short head and thorax, more convex and transverse eyes, and other characters readily separate it; the elytra have two transverse depressions across the disc, and the sutural region also depressed, as in that species, but are more convex at the base; the thorax has two deep transverse impressions on each side of the disc, and the basal foveæ very deeply impressed.

Elytra exceedingly coarsely and irregularly foveolate-striate throughout, a little flattened on the disc, widest at the base, the humeri prominent; eyes small or moderate; upper surface bright greenish-æneous, with a more or less cupreous tinge.

18. **Strongylium chiriquense.**

Moderately elongate, slightly convex, bright greenish-æneous. Head exceedingly coarsely and rugosely punctured, shallowly longitudinally impressed between the eyes, the latter small, feebly convex, and widely separated; antennæ rather slender, widening outwardly, joints 3 and 4 long, subequal, 7 much wider than 6, triangular, 8 the length of 7, about as broad as long (9–11 missing), 1–6 and the base of 7 more or less testaceous slightly stained with æneous, 8 and the outer half of 7 dark dull cyaneous; prothorax broad, strongly transverse, moderately convex, the sides immarginate, somewhat strongly rounded, narrowing in front, and armed in the middle with a very short indistinct tooth, the base and apex nearly straight, both very strongly margined, the anterior angles obtuse, the posterior angles subacute, the disc canaliculate and with a very large and rather deep rounded excavation on each side just above the deep basal foveæ, the surface very uneven and exceedingly coarsely and somewhat sparingly punctured, the punctures more

crowded at the sides; scutellum triangular, sparingly punctured; elytra rather short, somewhat depressed on the disc, widest at the base, the sides nearly straight to beyond the middle, the surface from the base to the apex with irregular and much interrupted rows of very coarse and deep excavations, the excavations punctiform at the extreme base and there arranged in more regular rows, the interstices strongly and irregularly raised towards the base and sides and here and there transversely or obliquely confluent, the third forming an elevated ridge near the base, smooth, the apices slightly pointed; beneath distinctly pubescent, shining, golden-bronze, the sides here and there tinted with greenish, somewhat finely and sparingly punctured, the flanks of the prothorax exceedingly coarsely and the sides of the metasternum coarsely and confluently so; legs stout, rather short, the femora very coarsely, the tibiæ roughly and more finely, punctured, brassy-cupreous, the basal half of the tibiæ more or less red, the tarsi golden-green, the first joint of the posterior tarsi much shorter than the apical joint.

Length $11\frac{1}{2}$ millim.; breadth 4 millim. (♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

One example. This species closely resembles *S. variicorne* in the sculpture of the elytra; but is readily separated by the broader shape, much stouter legs, very coarsely punctured femora, broader and shorter thorax (the sides of which are much more rounded), the pointed elytral apices, and the pubescent, more coarsely punctured, and very differently coloured under surface.

19. **Strongylium variicorne.** (Tab. XV. fig. 9, ♀.)

Moderately elongate, slightly convex, bright greenish-æneous, the head and thorax and the base of the elytra slightly tinted with cupreous. Head very coarsely and rugosely punctured, very shallowly longitudinally impressed between the eyes, the latter small, feebly convex, and rather widely separated; antennæ very slender, widening outwardly, comparatively rather short (♀), joints 3 and 4 long, subequal, 5–7 subtriangular, 8–10 subparallel, about equal in length and width, longer than broad, 11 oblong ovate, 1 æneous, 2–4, the basal half of 5, the apical half of 10, and 11 testaceous, the rest cyaneous; prothorax transverse, convex, the sides immarginate, a little rounded, slightly narrowing in front, and armed with a very short indistinct tooth in the middle, the base slightly sinuate, the apex straight, both somewhat strongly margined, the anterior angles obtuse, the hind angles rectangular, the basal foveæ very deep, the disc shallowly canaliculate and with a very irregular shallow excavation on each side about the middle, the surface very uneven and very coarsely and irregularly punctured, the punctures here and there confluent; scutellum triangular, nearly smooth, cupreous in tint; elytra moderately elongate, somewhat depressed on the disc, subparallel in their basal half, the surface from the base to the apex with irregular and much interrupted rows of very coarse and deep excavations, the excavations scarcely finer at the apex and at the base with punctiform impressions within, the interstices (the third especially) more or less strongly raised and very irregularly costate at the base, and obliquely or transversely confluent on the disc, smooth; beneath glabrous, very shining, bright metallic purplish-cyaneous, the sides greenish-æneous with golden tints, very minutely and very sparingly punctured, the flanks of the prothorax and the sides of the metasternum very coarsely so; legs slender, moderately long, the femora coarsely but sparingly, the tibiæ roughly and closely, punctured, greenish-æneous or golden-green, the femora at or towards the base, and the basal half of the tibiæ red, the tarsi and the extreme apex of the tibiæ cyaneous, the first joint of the posterior tarsi very much shorter than the apical joint.

Length $9\frac{1}{2}$–$10\frac{1}{2}$ millim.; breadth $2\frac{3}{4}$–$3\frac{1}{3}$ millim. (♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Two examples, apparently both females. Of the species here enumerated, *S. variicorne* most nearly resembles *S. costaricense*; it differs in the head being much more rugosely punctured, the eyes smaller and more widely separated, the antennæ more

slender towards the base, the thorax more coarsely and closely punctured, the elytra with the excavations still more intricate and irregular, and the interstices subcostate towards the base and raised and here and there obliquely confluent behind, the first joint of the posterior tarsi shorter, &c. *S. variicorne* is, however, somewhat closely allied to the Brazilian *S. leprosum* (Germ.), Mäkl., but differs in the much coarser excavations of the elytra and in the rows of excavations extending from the base to the apex. The male will doubtless prove to have much longer antennæ and longer and slightly curved anterior tibiæ, as in the corresponding sex of that species.

20. **Strongylium costaricense.** (Tab. XV. fig. 10, ♂.)

Moderately elongate, slightly convex, greenish-æneous, the head and prothorax with golden and cupreous tints, shining. Head coarsely and subrugosely punctured, the vertex a little smoother, shallowly longitudinally impressed between the eyes, the latter moderately large and separated by a narrow space; antennæ (♂) rather short, scarcely reaching to the first fourth of the elytra, slender, subfiliform, joints 3 and 4 long, subequal, the penultimate joints much longer than broad and but little widened outwardly, the apical joint oblong ovate, ferruginous, joints 5–7 a little darker and tinged with cyaneous, the basal joint of a golden-green tint; prothorax transverse, but not strongly so, moderately convex, the sides immarginate, straight behind, a little rounded and narrowing in front, and armed with a short tooth about the middle, the apex nearly straight, the base slightly sinuate, both strongly margined, the anterior angles rounded, the hind angles subrectangular, the disc distinctly canaliculate (more deeply so at the base and apex), and with a deep transverse impression on each side a little above the broad deep basal foveæ, and another shallower one on each side a little before the middle, the surface with scattered very coarse punctures; scutellum triangular, almost smooth, cupreous in tint; elytra moderately long, the disc a little flattened from about the basal third to the apex, very gradually narrowing from the base, the sides almost straight to beyond the middle, the surface from the base to the apex with irregular and much interrupted rows of very coarse and deep excavations, the excavations coarsest and deepest and here and there confluent on the middle of the disc and towards the sides, more crowded at the base, and finer and shallower (but not placed in deep grooves) at the apex, the interstices quite smooth and shining; beneath more shining, bright greenish-æneous, much tinted with golden, almost glabrous, moderately finely and rather sparingly, the flanks of the prothorax and the sides of the metasternum and side-pieces very coarsely, punctured; legs rather long, moderately slender, the femora and tibiæ roughly and rather closely punctured and golden-cupreous in tint, the tarsi cyaneous, the first joint of the posterior tarsi as long as the apical joint; anterior tibiæ very slightly curved, and the fifth ventral segment shallowly transversely impressed in the middle behind, in the male.

Length 12 millim.; breadth 4 millim. (♂.)

Hab. Costa Rica (*Van Patten*).

One example. This species is allied to *S. viridipes*, from which it is distinguished by the posteriorly flattened disc and coarser excavations of the elytra (the excavations not placed in deep grooves at the apex), the differently coloured and shorter antennæ (in the male), the more coarsely punctured thorax (the sides of which are toothed in the middle), the roughly punctured femora, the shorter tarsi, &c.

Other allied undescribed forms inhabit Tropical South America.

Elytra long, coarsely foveolate-striate to the middle, and thence to the apex deeply sulcate; eyes small; prothorax conical; upper surface cyaneous, moderately shining; fourth and fifth ventral segments red; size large.

21. **Strongylium conicicolle.** (Tab. XIV. fig. 25, ♀.)

Strongylium conicicolle, Mäkl. Monogr. p. 339; Act. Soc. Fenn. viii. part 1, p. 447, t. 1. f. 3 (antenna), & t. 3. f. 22[1].

Hab. Nicaragua, Chontales (*Janson*); Costa Rica (*Sallé*); Panama, Bugaba, Volcan de Chiriqui (*Champion*), Veragua[1].

We figure a female example from Bugaba.

Elytra convex, very finely and lightly striate-punctate, widest at the base, the humeri prominent; eyes small; upper surface unicolorous bright bronze.

22. **Strongylium colombianum.** (Tab. XV. fig. 11, ♀.)

Elongate, rather convex, entirely bright bronze, sometimes with a golden tinge. Head rather finely and somewhat closely punctured, shallowly impressed between the eyes, the latter small and very widely separated; antennæ (♀) short, passing some little distance beyond the base of the prothorax, gradually widening outwardly, joint 4 the length of 3, but widening at the apex, the penultimate joints rather longer than broad, the apical joint ovate, joints 1–4 cyaneous or violaceous, 5–11 piceous, the extreme apex dull ferruginous; prothorax large, broad, convex, strongly transverse, the sides immarginate, narrowing a little anteriorly, almost straight or slightly sinuous behind, and armed with a short tooth about the middle, the anterior angles rounded, the hind angles rectangular or subacute, the base slightly sinuate, the apex straight, the basal foveæ narrow and shallow, the disc unimpressed, the surface rather finely (but deeply) and closely punctured; scutellum subtriangular, smooth; elytra long, a little flattened on the disc, widest at the base, the sides nearly straight in their basal half, rounding and gradually narrowed beyond, the base rather strongly impressed on each side within the somewhat prominent humeri, the suture narrowly depressed for a short distance at the base, finely striate-punctate, the punctures closely placed, rather coarser towards the sides and base, and becoming finer towards the apex, the interstices flat throughout and minutely and sparingly (sometimes more closely) punctured; beneath glabrous, bright greenish-æneous, the sides and margins of the ventral segments more or less reddish-brown, sparingly but very distinctly punctured, the sides of the metasternum and the flanks of the prothorax very coarsely so; prosternum convexly raised at the apex; legs short, rather stout, somewhat sparingly but rather coarsely punctured, æneous or greenish-æneous, the tarsi darker; the first joint of the posterior tarsi very short, only a little longer than the second joint and not nearly half the length of the apical one.

Length 12–14 millim.; breadth $3\frac{2}{3}$–4 millim. (♀.)

Hab. Panama, Bugaba (*Champion*).—Colombia, Bogota (*coll. F. Bates*).

The description is taken from three examples, one from the State of Panama and two from Southern Colombia, apparently all females. *S. colombianum* cannot be compared with any other species inhabiting our region; in its general shape it somewhat approaches the Brazilian *S. flavicrus* (Germ.), though wholly different in colour and sculpture; the exceedingly short first joint of the hind tarsi (still shorter than in *S. flavicrus*) is a noteworthy character. A closely allied undescribed form from Chanchamayo, Peru, is contained in Mr. F. Bates's collection.

The Bugaba specimen is figured.

Elytra very long and attenuate, finely striate-punctate, here and there depressed along the suture, the apices obliquely truncate; antennæ short, subclavate; eyes small; upper surface bright bronze.

23. **Strongylium langurioides.** (Tab. XV. fig. 12, ♀.)

Very elongate, narrow, moderately convex, bright bronze, with a slight golden tint. Head coarsely and rather closely punctured, the intraocular space indistinctly impressed in the middle; eyes rather small, a little convex, widely separated; antennæ (♀) short, scarcely passing the base of the prothorax, subclavate, very greatly widened outwardly, joints 3 and 4 comparatively short, subequal, 5–7 subtriangular, each much wider than the preceding, 8–10 subcyathiform, the width of 7, transverse, 9 and 10 very strongly so, 11 much narrower but longer than 10, short ovate, 1–4 reddish-testaceous, 1 tinged with cyaneous, 5–10 dull piceous, 11 in greater part pale testaceous; prothorax cylindrical, as long as broad, the sides almost straight, very slightly narrowing in front, the base a little sinuate and strongly margined, the apex straight, the anterior angles rounded, the hind angles rectangular, the basal foveæ deep, the disc with a rounded impression on each side behind the middle and a little flattened before the base, the surface sparingly and coarsely punctured; scutellum triangular, smooth; elytra very long, attenuate, gradually narrowing from the base, the apices a little produced and obliquely truncate, shallowly but somewhat coarsely striate-punctate, the punctures becoming almost obsolete at the apex, the interstices smooth and flat throughout, the disc a little flattened and with a row of three large shallow oblong impressions (the first some distance below the base), beyond which are one or two irregular (perhaps accidental) excavations, on either side near the suture; beneath greenish-æneous, the sides, the ventral segments at the base, and the coxæ, suffused with reddish-brown, glabrous; legs rather long and slender, the femora smooth, æneous, the basal half of the femora and the tibiæ in great part reddish, the tarsi bluish-black, the first joint of the posterior tarsi shorter than the apical joint.

Length 10½ millim.; breadth 2½ millim. (♀.)

Hab. Nicaragua, Chontales (*Belt*).

A single example. This remarkable species bears a very close resemblance to a *Languria*, even to the truncate apices of the elytra and the clavate antennæ. The elytra have a longitudinal series of large shallow depressions on each side of the suture.

Elytra finely striate-punctate, foveolate-striate at the sides towards the base, the punctures almost obsolete at the apex; upper surface obscure greenish-æneous, the elytra cupreo-æneous, shining; form cylindrical.

24. **Strongylium lucidum.**

Strongylium lucidum, Mäkl. Monogr. p. 175; Act. Soc. Fenn. viii. part 1, p. 283[1].

Hab. Costa Rica (*Mus. Berol.*[1]).

Unknown to me. Apparently an ally of the Brazilian *S. aurichalceum* (Germ.).

Elytra foveolate-striate to beyond the middle and thence to the apex sulcate; prothorax subquadrate; eyes large; upper surface dull greenish-cupreous; under surface greenish-violaceous, the fifth ventral segment red.

25. **Strongylium ventrale.** (Tab. XVI. fig. 1, ♀.)

Elongate ovate, slightly convex, rather dull, greenish-æneous, with a cupreous tint, the prothorax obscure reddish-brown, the head also in part reddish. Head very closely and coarsely punctured; eyes large and narrowly separated; antennæ (♀) short, rather strongly widened outwardly, joint 4 about the length of but distinctly wider than 3, subtriangular, joints 5–7 each widened almost from the base, subequal, 8–10 decreasing a little in length, 10 about as broad as long, 11 ovate, and considerably longer than 10, 1–4 cyaneous, the rest dull bluish-black; prothorax subquadrate, broader than long, a little flattened on the disc, the sides indistinctly margined (the margin not visible from above), nearly straight, scarcely narrowing in front, and armed in the middle with a distinct tooth, the base a little sinuate, the apex straight, the anterior angles rounded, the hind angles slightly divergent and subacute, the disc shallowly canaliculate (more distinctly so towards the apex), and very deeply impressed in the middle before the base, the basal foveæ very deep, the surface uneven and very coarsely and rather closely punctured; scutellum subtriangular, sparingly punctured; elytra long, slightly convex, widest in the middle, narrowing a little towards the base, striate-punctate, the punctures from the base to a little beyond the middle (equally from the suture to the lateral margin) in the form of coarse rounded or oblong excavations which are here and there longitudinally confluent, and thence to the apex (abruptly) very fine and shallow, the interstices smooth, from the base to beyond the middle a little raised, and here and there transversely confluent, and thence to the apex rather convex; beneath and the epipleuræ bright cyaneous, the fifth ventral segment, and the sides of the preceding segment broadly, reddish-testaceous, glabrous, sparingly but somewhat coarsely punctured, the sides of the metasternum and the flanks of the prothorax very coarsely so; legs rather short, coarsely punctured, more or less cyaneous in tint; the first joint of the posterior tarsi long, as long as the apical joint.

Length $11\frac{2}{3}$ millim.; breadth 4 millim. (♀.)

Hab. Panama (*coll. F. Bates*).

One example. *S. ventrale* cannot be satisfactorily compared with any other species noticed here. It agrees with *S. auratum* in the reddish-testaceous apex of the venter, though wholly differing in the sculpture of the elytra, the shape of the thorax, subapproximate eyes, &c., and also by its very much smaller size.

Elytra long, with rows of scattered irregular foveæ; eyes very large; prothorax closely and rather coarsely punctured, canaliculate; upper surface dull bronze-black, the elytra more shining, testaceous, the foveæ black; size large.

26. **Strongylium cribripes.** (Tab. XIV. fig. 24, ♀.)

Strongylium cribripes, Mäkl. Monogr. p. 167; Act. Soc. Fenn. viii. part 1, p. 275[1].

Hab. Mexico[1], Santecomapan, Cordova (*Sallé*); Nicaragua, Chontales (*Belt, Janson*); Panama, Chiriqui (*Trötsch*).

In the male of this species, as noticed by Mäklin, the metasternum is densely clothed with short adpressed hair in the middle behind, and the fifth ventral segment broadly and deeply impressed.

An example from Chontales is figured.

Elytra comparatively short and convex, very finely and lightly striate-punctate; antennæ quite slender; eyes small; prothorax narrow, almost smooth; upper surface shining, greenish-violaceous, the elytra testaceous.

27. **Strongylium frontale.** (Tab. XV. fig. 13, ♀.)

Elongate ovate, convex, greenish-violaceous, shining. Head coarsely and closely punctured, the vertex much more sparingly so, deeply longitudinally impressed between the eyes, of a greenish-golden tint, the basal half dark violaceous, the eyes feebly convex and rather widely separated; antennæ (♀) moderately long, slender, very gradually widening outwardly, joints 3 and 4 long, subequal, 4 not wider than 3, 5–9 gradually decreasing in length, 9 and 10 subequal, and each longer than broad, 11 ovate, and a little longer than 10, 1–5 greenish-æneous, 6–11 bluish-black, dull, the apical half of the eleventh testaceous; prothorax comparatively narrow, convex, rather broader than long, the sides immarginate, a little rounded, and very slightly narrowing in front, the anterior angles rounded, the hind angles subacute and outwardly directed, the base and apex nearly straight and moderately strongly margined, the basal foveæ small but deep, the disc canaliculate behind, and impressed in the centre before the base, the surface with fine very widely scattered punctures, greenish-æneous, tinted with dark violaceous; scutellum triangular, smooth, bluish-violaceous; elytra somewhat strongly convex, rather abruptly declivous behind, moderately elongate, subparallel to beyond the middle, finely and lightly striate-punctate, the striæ gradually becoming finer posteriorly, and nearly obsolete at the apex, the interstices smooth and perfectly flat throughout, the surface testaceous, the suture entirely and the lateral margins at the apex narrowly piceous; beneath violaceous, glabrous, the metasternal side-pieces and the flanks of the prothorax rather coarsely punctured, the rest almost smooth; legs rather slender, moderately long, sparingly punctured, greenish-violaceous; first joint of the posterior tarsi shorter than the apical one.

Length 11 millim.; breadth 4 millim. (♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

One example. This species in its system of coloration resembles *S. gerstaeckeri* and *S. belti*: it is readily separated from both by the very slender legs and antennæ; the more cylindrical, smoother, and relatively narrower thorax; the more convex, shorter, and smoother elytra, &c.

Elytra longer and less convex, finely striate-punctate; antennæ stouter; eyes small; upper surface shining, more or less cyaneous or violaceous, the elytra testaceous.

28. **Strongylium gerstaeckeri.** (Tab. XIV. fig. 22, ♀.)

Strongylium gerstaeckeri, Mäkl. Monogr. p. 169; Act. Soc. Fenn. viii. part 1, p. 277[1].

Hab. Mexico, Cordova, Catemaco (*Sallé*); Guatemala, Senahu (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*); Costa Rica[1]; Panama (*coll. F. Bates*), Volcan de Chiriqui (*Champion*).

This species varies considerably in size (13–20½ millim.), and in the intensity of the punctuation and also in the colour of the elytra. Mäklin describes the elytra of the male as pallid-testaceous, and those of the female as rufo-testaceous, but this is not borne out by the long series before me. Chiriqui examples are very large, and have the elytra very shallowly and very finely striate-punctate; others from Nicaragua have the elytra darker and of a redder tint, and more coarsely striate-punctate; and one

from Guatemala has the elytra sculptured as in Chiriqui specimens, but with the thorax much more finely punctured. The two examples from Mexico in the Sallé collection (one of which is erroneously labelled *S. impressicolle*, Mäkl.) are much smaller in size (12 millim.), but scarcely differ in other respects; one of these has the head and thorax greenish-æneous in tint.

The single specimen from Panama in Mr. F. Bates's collection resembles those from Chiriqui, but differs in having the elytra more coarsely and more uniformly striate-punctate, the punctures being very little finer at the apex; it doubtless represents a variety of the same species.

An example from Chiriqui is figured.

29. **Strongylium belti.**

Elongate, subcylindrical, greenish-æneous or cyaneous, shining. Head coarsely and irregularly, but somewhat closely, punctured, shallowly longitudinally impressed between the eyes, the latter rather small and widely separated in both sexes; antennæ in the male rather long and slender, reaching to about the first third of the elytra, in the female much shorter and stouter, joints 3 and 4 subequal, 5–10 differing very little in length or width (in the male very much longer than broad, and very little wider at the apex than at the base, in the female slightly longer than broad), black with the base more or less greenish-æneous (in one example dark ferruginous outwardly); prothorax transverse, convex, the sides immarginate, rounded, and narrowing anteriorly, and a little sinuous behind, the apex straight, the base slightly sinuate, both very strongly margined, the anterior angles obtuse, the hind angles rectangular, the basal foveæ very deep (in one example shallower), the disc very deeply transversely impressed and obsoletely canaliculate immediately before the base, the surface coarsely and deeply, but not very closely, punctured; scutellum subtriangular, flat, smooth, greenish-æneous or cyaneous; elytra moderately long, subparallel to beyond the middle, striate-punctate, the punctures fine, or rather coarse and crenate, and approximate, the interstices smooth, flat, or very feebly raised, and more convex towards the sides and apex, the surface entirely testaceous; beneath glabrous, bright cyaneous, very sparingly and minutely punctured, the sides of the metasternum with scattered coarse impressions, the flanks of the prothorax very coarsely punctured; legs comparatively rather short, sparingly but somewhat coarsely punctured, greenish-æneous or cyaneous, the tarsi piceous, the first joint of the posterior tarsi shorter (more distinctly so in the female) than the apical joint; the coxæ and the inner edge of the femora (that of the posterior pair indistinctly) clothed with short hair, and the anterior tibiæ very slightly curved, in the male, the fifth ventral segment unimpressed in this sex.
Length $10\frac{2}{3}$–11 millim.; breadth 3–$3\frac{1}{2}$ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt, Janson*).

Two examples. This species can only be compared with *S. gerstaeckeri*, from which it differs in its smaller size, much narrower shape, the more coarsely punctured head and thorax, the rectangular (not acute and outwardly directed) hind angles of the thorax, &c. The femora have their inner edge more or less pubescent in the male, as in *S. gerstaeckeri*. *S. belti* varies considerably in the intensity of the punctuation of the upper surface; in the male example the elytra have the punctures much coarser, and the interstices a little convex, and the thorax more coarsely and more sparingly punctured; *S. gerstaeckeri* varies in a similar manner.

Elytra lightly striate-punctate; eyes small; upper surface shining, greenish-æneous, the elytra reddish-brown with a translucent greenish-æneous tinge.

30. **Strongylium viriditinctum.** (Tab. XVI. fig. 4, ♀.)

Elongate, subcylindrical, greenish-æneous, moderately shining. Head coarsely and rather sparingly punctured, deeply longitudinally impressed between the eyes, much suffused with cupreous, the eyes small and somewhat widely separated; antennæ (♀) rather stout, joint 4 about as long as, but stouter than, 3, subtriangular, joints 5–10 about equal in length and breadth, wider than 4, 9 and 10 almost as wide at the base as at the apex, all longer than broad, 11 oblong ovate, 1–4 more or less æneous, the rest dull black; prothorax subcylindrical, nearly as long as broad, subquadrate, the sides immarginate, very slightly narrowing and rounded in front, and sinuate behind immediately before the acute outwardly-directed hind angles, the anterior angles rounded, the base slightly sinuate, and very deeply grooved within between the spaces usually occupied by the foveæ, the latter not defined, the apex straight, the apical margin very deeply grooved within in the middle, the disc unimpressed, the surface sparingly and rather coarsely and deeply punctured, greenish-æneous; scutellum subtriangular, smooth, æneous; elytra long, parallel to beyond the middle, moderately convex, finely striate-punctate, the punctures approximate, and becoming finer and shallower towards the apex, the interstices flat, feebly convex at the apex, and sparingly but quite distinctly punctured, the surface (including the epipleuræ) reddish-brown, with a translucent greenish-æneous tinge; beneath glabrous, very shining, greenish-æneous, very sparingly and finely punctured, the sides of the metasternum and the flanks of the prothorax with scattered coarse impressions; legs comparatively rather short, entirely greenish-æneous, the femora sparingly and somewhat coarsely, the tibiæ more closely, punctured, the first joint of the posterior tarsi shorter than the apical joint.

Length 14¼ millim.; breadth 5 millim. (♀.)

Hab. Guatemala, Zapote 2500 feet (*Champion*).

One example. This species closely resembles *S. eminens*: compared with the corresponding sex of that insect it differs in having the epistoma more coarsely and the vertex more sparingly punctured, the eyes very much smaller and widely separated, the thorax less strongly transverse and more finely punctured, the elytra comparatively much shorter, with the rows of punctures finer and placed upon almost obsolete striæ, and the interstices flat (rather convex in *S. eminens*), and also in its smaller size.

Elytra very long, punctate-striate, the punctures subapproximate, the interstices slightly convex; eyes large; upper surface bright greenish-æneous, the elytra reddish-brown with a translucent greenish-æneous tinge; size large.

31. **Strongylium eminens.** (Tab. XIV. fig. 21, ♀.)

Strongylium eminens, Mäkl. Monogr. p. 266; Act. Soc. Fenn. viii. part 1, p. 374[1].

Hab. Mexico[1], Cordova (*Sallé*).

Three examples of this apparently rare species are contained in the Sallé collection.

Elytra long, with rows of approximate transverse impressions, the interstices a little convex; eyes small, distant; upper surface moderately shining, greenish-æneous or cupreous, the prothorax usually of a brilliant golden-cupreous tint; under surface bright metallic green or violaceous, the fourth and fifth ventral segments red; size large.

32. **Strongylium auratum.** (Tab. XVI. fig. 2, ♂.)

Stenochia aurata, Castcln. Hist. Nat. Ins. Col. ii. p. 240[1].
Stenochia lebasii, Dej. Cat. 3rd edit. p. 232[2].
Stenochia hilaris (Chevr.), Dej. Cat. l. c.[3]
Strongylium auratum, Mäkl. Monogr. p. 293; Act. Soc. Fenn. viii. part 1, p. 401[4].

Hab. Mexico[3 4], S.W. Yucatan, Cordova, Tuxtla, Chiapas (*Sallé*), Chilpancingo, Almolonga, Cholula, Jalapa, Tapachula (*Höge*); British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala, Las Mercedes, Panzos, San Juan in Vera Paz (*Champion*); Nicaragua, Chontales (*Belt, Janson*); Costa Rica (*coll. F. Bates*); Panama (*coll. F. Bates*), Chiriqui (*Ribbe*).—Colombia[1 2 4]; Bolivia[4].

This insect is abundant throughout the forest-region of Central America, and extends southwards to Bolivia; it ascends to an elevation of about 3000 feet. *S. auratum* is very probably a variety of *S. hæmorrhoidale* (Fabr.) (=*Stenochia viridis*, Casteln., =*Helops auricollis*, Germ.), and is indeed so labelled in Mr. F. Bates's collection; but as none of our examples are referable to the latter, I treat it as distinct; both are found in Southern Colombia. A male example from San Juan is figured.

Elytra long, minutely striate-punctate, almost smooth; eyes very large; surface entirely dull black; size large.

33. **Strongylium atrum.** (Tab. XV. fig. 14, ♂.)

Elongate, rather depressed, entirely black, opaque. Head closely, coarsely, and subequally punctured, almost unimpressed between the eyes, the latter very large and subapproximate; antennæ (♂) long, rather slender, very gradually widening outwardly, joints 3 and 4 moderately long, subequal, 5–10 all very much longer than broad, gradually decreasing in length, 11 rather longer than 10, widening outwardly, and obliquely truncate at the apex; prothorax nearly as long as broad, rather convex, subquadrate, the sides immarginate, nearly straight, only very slightly narrowing in front, the base and apex nearly straight, and very feebly margined, the anterior angles rounded, the hind angles rectangular, the basal foveæ scarcely indicated, the surface without depressions, very closely, rather coarsely, and equally punctured, the punctures shallow; scutellum triangular, very distinctly punctured; elytra long, subparallel to beyond the middle, depressed, exceedingly finely and shallowly striate-punctate, the punctures oblong in form, rather distant one from another, and becoming almost obsolete at the apex, the interstices perfectly flat throughout, and very finely (but quite distinctly) punctured, the apices a little produced; beneath a little more shining, finely and sparingly punctured, the flanks of the prothorax and the sides and side-pieces of the meso- and of the metasternum coarsely so; the fifth ventral segment slightly depressed in the middle behind in the male; legs long, rather coarsely punctured; first joint of the posterior tarsi long, as long as the apical one; prosternum broad, abruptly declivous.

Length $16\frac{1}{2}$ millim.; breadth $5\frac{1}{3}$ millim. (♂.)

Hab. Mexico, Ventanas in Durango (*Höge*).

One example. This species is distinguished by its uniform dull black colour and depressed form. *S. atrum* cannot be compared with any other species noticed here; it bears a certain superficial resemblance to some members of other groups, *e. g.* to *Rhinandrus obsoletus*, &c.

Elytra finely punctate-striate; eyes quite small; upper surface greenish-æneous, the elytra dull red; size rather large.

34. **Strongylium opacipenne.** (Tab. XV. fig. 15, ♂.)

Moderately elongate, rather broad, somewhat depressed, greenish-æneous with a slight golden tint, not very shining. Head closely and rather coarsely punctured, more sparingly so on the vertex, shallowly longitudinally impressed between the eyes; eyes small, very widely separated; antennæ moderately long, rather rapidly widening outwardly, joints 3 and 4 long, subequal, 5–8 more or less subtriangular, 9 and 10 about as long as broad in the female, slightly longer in the male; prothorax strongly transverse, broad, a little broader behind in the female, feebly convex, the sides immarginate (rarely with traces of a fine obsolete margin), straight, narrowing from the base, rather more rapidly so in the female, the apex nearly straight, the base slightly sinuate, the hind angles subacute, the anterior angles obtuse, the basal foveæ deep, the disc with a shallow indistinct impression on each side about the middle, and a more distinct one in the centre at the base, evidently canaliculate towards the base, indistinctly so in front, the surface rather sparingly and coarsely punctured, moderately shining; scutellum broad, subtriangular, slightly punctured, greenish-æneous, shining; elytra moderately long, somewhat depressed, rather broad, still broader in the female, subparallel in their basal half, with rows of fine closely placed punctures placed upon fine shallow striæ, the punctures coarser at the extreme base and a little more scattered at the apex, the interstices nearly flat towards the base, slightly convex behind, and closely and very distinctly punctured, the surface rather dull, red, sometimes very slightly suffused with greenish; beneath more shining, greenish-æneous with cyaneous tints, finely and sparingly punctured, the flanks of the prothorax coarsely so, the metasternum pubescent in both sexes; legs moderately long, greenish-æneous, rather closely punctured, the first joint of the posterior tarsi rather shorter than the apical one; the anterior and intermediate tibiæ a little curved in both sexes, scarcely more strongly so in the male; fifth ventral segment in the male unimpressed, and like that of the female.

Length $12\frac{1}{3}$–17 millim.; breadth $4\frac{2}{3}$–7 millim. (♂ ♀.)

Hab. Mexico, Cerro de Plumas (*Höge*).

Many specimens. This species is distinguished by its rather dull surface and greenish-æneous colour; the elytra red, with rows of fine punctures placed upon very shallow striæ, and the interstices a little convex and closely and very distinctly punctured.

From *S. höfpneri* and its varieties it is at once separated by its more elongate and less convex shape, dull elytral surface, different sculpture, &c.

Elytra finely punctate-striate, the interstices convex; eyes quite small; upper surface dull bluish-green, the suture, base, and lateral margins of the elytra broadly red.

35. **Strongylium bivittatum.** (Tab. XV. fig. 16, ♂.)

Moderately elongate, rather broad, convex, dull bluish-green. Head broad behind, rather narrowed in front, very closely, coarsely, subrugulosely punctured, indistinctly impressed between the eyes; eyes small, very widely separated; antennæ (♂) rather short, moderately stout, widening outwardly, joints 3 and 4

subequal, 8 about as long as broad, 10 subtransverse, bluish-black; prothorax strongly transverse, very broad, subquadrate, not very convex, the sides obsoletely margined (visibly so from above), nearly straight (though slightly sinuous) in their basal half, and narrowing immediately before the rounded anterior angles, the apex nearly straight, the base slightly sinuate, the basal foveæ very shallow, the surface very closely, somewhat coarsely, subequally punctured, a narrow very slightly impressed line, ending before and behind in a deeper groove, on the disc, and a space near the subrectangular hind angles, smoother; scutellum broad, subtriangular, distinctly punctured, greenish-æneous, shining; elytra convex, moderately long, subparallel to beyond the middle, punctate-striate, the punctures coarse and subcrenate at the extreme base, moderately coarse at the sides, and fine and shallow on the disc, becoming still finer towards the apex, the interstices convex throughout, and minutely and sparingly punctured, the surface rather dull, red, each elytron with a broad obscure greenish-fuscous patch on the disc (occupying the second to the seventh interstices) extending from a little below the base nearly to the apex; beneath more shining, cyaneous, sparingly pubescent, coarsely but rather sparingly punctured, the middle of the metasternum much more finely so; legs short and stout, closely and somewhat coarsely (the femora and tibiæ equally so) punctured, cyaneous, the tarsi darker, the first joint of the posterior tarsi as long as the apical one; the anterior tibiæ curved, and somewhat strongly sinuate within, in the male.

Length 14 millim.; breadth 5 millim. (♂.)

Hab. Mexico, Tehuantepec (*Sallé*).

One example. This species approaches *S. opacipenne* in some of its characters, especially in the shape of the head; but is readily separated, apart from colour differences, by the shorter and stouter legs, the shorter antennæ, the differently shaped and much more closely punctured thorax, the convex and smoother elytral interstices, the punctures of the striæ coarse at the base, &c. *S. bivittatum* also slightly resembles *S. cruentatum* and other similarly-coloured species, though easily distinguished by the above-mentioned characters. In the elytral maculation the present insect is somewhat similar to the Brazilian *S. limbatum* (Germ.), Mäkl. The single specimen is without abdomen, but from the structure of the anterior tibiæ is no doubt a male.

Elytra long, coarsely striate-punctate, the punctures often transverse and closely approximate; eyes small; upper surface violaceous or cyaneous, the elytra banded with reddish-testaceous or testaceous.

36. **Strongylium aulicum.** (Tab. XV. fig. 17, ♀.)

Strongylium aulicum, Mäkl. Monogr. p. 255; Act. Soc. Fenn. viii. part 1, p. 363[1].
Strongylium flavicorne, Chevr. in litt.

Hab. Mexico, Cordova, Yolos (*Sallé*[1]); Guatemala, Chacoj and San Juan in Vera Paz (*Champion*); Nicaragua, Chontales (*Belt*).

This is one of a group of species numerously represented in Tropical South America, and recognizable by its elongate cylindrical form and bright cyaneous or violaceous surface, the elytra each with a broad testaceous band at the base and a rather narrower one beyond the middle, the bands connected along the lateral margin, but not reaching the suture. The antennæ vary in colour from testaceous to piceous; rarely (one example from Chontales) the tibiæ are red. The thorax sometimes shows traces of a fine more

or less obsolete lateral margin. As Mäklin remarks, *S. aulicum* is very closely allied to the Brazilian *S. nobile*. A Chontales example is figured.

37. **Strongylium decoratum.** (Tab. XV. fig. 18, ♀, var.)

Strongylium decoratum, Mäkl. Monogr. p. 257; Act. Soc. Fenn. viii. part 1, p. 365[1].
Strongylium venustum, Mäkl. in litt.

Hab. Costa Rica (*Wagner*[1]); Panama, Chiriqui (*Trötsch*).—Bolivia[1].

A single female example before me, from Chiriqui, 14 millim. in length, differs from Mäklin's description of *S. decoratum* in having the two transverse testaceous bands of the elytra united at the suture, and the legs rather differently coloured (the apical third of the intermediate and of the posterior femora, as well as all the tibiæ, being testaceous, and the tarsi piceous); it is doubtless a variety of that insect.

The Chiriqui specimen is figured.

38. **Strongylium panamense.** (Tab. XV. fig. 19, ♀.)

Elongate, subcylindrical, violaceous or bluish-violaceous, shining. Head greenish-æneous in front, violaceous behind, coarsely and rather closely punctured, the intraocular space and the vertex quite sparingly so, deeply longitudinally impressed between the eyes, the vertex in front broadly flattened and somewhat depressed, the antennary orbits prominent; eyes rather small, somewhat widely separated; antennæ (♀) stout, rather short, rapidly widening outwardly, joint 4 the length of but wider than 3, subtriangular, joints 6–10 about as broad as long, 11 ovate, entirely testaceous (in one example with the basal four joints greenish-æneous in tint); prothorax nearly as long as broad, subcylindrical, the sides obsoletely margined throughout (the margin not visible from above), gradually narrowing anteriorly, and a little rounded (in one example slightly sinuate before the base), the anterior angles rounded, the hind angles more or less rectangular, the base and apex slightly sinuate and rather feebly margined, the disc obsoletely canaliculate and broadly and shallowly depressed in the middle behind, the surface very sparingly and rather finely (but deeply) punctured; scutellum subtriangular, rather convex, smooth, violaceous; elytra long, subparallel in their basal half, a little acuminate at the apex, striate-punctate, the punctures coarse, deep, and subapproximate, and slightly transverse in the basal half, thence to the apex rapidly becoming very much finer and shallower, and at the apex itself almost obsolete, the interstices smooth, nearly flat or but little raised on the basal half of the disc, convex at the apex and also (in one example) at the sides, the surface testaceous nearly to the middle, the apical half violaceous; beneath very bright greenish-æneous or cyaneous, glabrous, the coxæ and trochanters with a few short hairs, almost smooth, the sides of the metasternum with a few widely scattered coarse impressions, the flanks of the prothorax coarsely but sparingly punctured; legs stout, short, very sparingly punctured, the femora almost smooth, testaceous, the extreme base of the four hinder femora suffused with greenish-æneous, all the tarsi bluish-black, the first joint of the posterior tarsi about as long as the apical joint.

Length 12–13 millim.; breadth 3½–4 millim. (♀.)

Hab. Panama (*coll. F. Bates*), Chiriqui (*Trötsch*).

Two examples, apparently both females. *S. panamense* is readily identified by its stout ferruginous antennæ, obsoletely margined, subcylindrical, and comparatively smooth thorax, and stout legs; and also by the coloration of the elytra. A similarly-coloured allied undescribed species, from Southern Colombia, is contained in Mr. F. Bates's collection.

The example from Mr. F. Bates's collection is figured.

Elytra long or moderately long, more or less coarsely striate-punctate, the punctures often transverse and closely approximate; upper surface greenish-æneous, violaceous, or cyaneous, the elytra rarely nigro-æneous, the latter (except in vars. of S. varians *and* S. misantlæ) *more or less margined or striped with red, reddish-testaceous, or testaceous; size moderate or small.*

a. *Elytra long, usually more or less cylindrical, the lateral margins and base reddish-testaceous or testaceous.*

† *Eyes small or moderate, more or less widely separated.*

39. **Strongylium cruentatum.**

Strongylium cruentatum, Mäkl. Monogr. p. 227; Act. Soc. Fenn. viii. part 1, p. 335 [1].

Hab. Mexico [1], Cordova, Santecomapan (*Sallé*).

S. cruentatum differs from its allies in having the punctures of the elytral series fine and shallow on the disc, the punctures not transverse, the interstices flat on the disc and broad and shining; and also by the very stout antennæ.

40. **Strongylium nitidiceps.** (Tab. XV. fig. 20, ♀.)

Elongate, subcylindrical, greenish-æneous more or less suffused with cyaneous or violaceous, shining. Head broad, comparatively very smooth, the antennary orbits somewhat dilated and very prominent, very sparingly and finely punctured, longitudinally impressed between the eyes, very shining, the anterior half much suffused with golden, the oral organs (the mandibles excepted) testaceous; eyes comparatively small, rather convex, very widely separated in both sexes; antennæ slender, rather short (not passing very far beyond the base of the elytra in either sex), very little longer in the male than in the female, gradually widening outwardly, joints 3 and 4 long, subequal, the penultimate joints much longer than broad, the apical joint rather longer than the tenth and ovate, the basal joint of a greenish-golden tint, the rest entirely testaceous; prothorax as long as or rather longer than broad, subcylindrical, the sides (at least in one example) very obsoletely margined behind though not visibly so from above, a little rounded about the middle, slightly sinuate behind, and gradually narrowing in front, the apex straight and feebly margined (the margin not grooved within), the base slightly sinuous, the basal foveæ deep, the anterior angles obtuse, the hind angles subrectangular, the disc broadly flattened in the middle behind and with a shallow (or deep) rounded fovea on each side about the middle, the surface finely or moderately finely, very sparingly, subequally punctured; scutellum triangular, smooth, greenish-æneous; elytra long, subparallel in their basal half, moderately convex, rather finely striate-punctate, the punctures transverse in shape, shallow, approximate, and gradually becoming almost or quite obsolete towards the apex, the interstices flat, feebly convex at the apex only, and very minutely and sparingly punctured, the apices a little produced, somewhat compressed laterally, the first or sutural stria deeply impressed behind, the surface duller and less shining than that of the prothorax, red or reddish-testaceous, with a very broad obscure bluish- or greenish-æneous sutural stripe extending from a little below the base to the apex; beneath greenish-æneous, very sparingly punctured, indistinctly pubescent; legs comparatively rather short, the femora almost smooth, violaceous, the tibiæ rather short, roughly punctured, greenish-æneous, the tarsi piceous, the first joint of the posterior tarsi rather longer than the apical one; the anterior tibiæ in the male very short and but little curved, scarcely differing from those of the female.

Length $11\frac{2}{3}$–13 millim.; breadth $3\frac{1}{3}$–4 millim. (♂ ♀.)

Hab. Mexico, Cerro de Plumas (*Höge*).

Two examples only. This very distinct species resembles *S. nubeculosum* and

S. cruentatum in colour and general facies; but it is at once separated from both by the broad and comparatively very smooth head, the very widely separated eyes, the slender testaceous antennæ, the long subcylindrical thorax, the grooved and slightly produced apices of the elytra, &c.

41. Strongylium laterale.

Strongylium laterale, Mäkl. Monogr. p. 226; Act. Soc. Fenn. viii. part 1, p. 334[1].

Hab. Mexico (*coll. Chevrolat*[1], *coll. F. Bates*), Tuxtla (*Sallé*).

I have only seen two examples (a male and a female) that I can satisfactorily refer to this species: these specimens, however, are only 11–12½ millim. in length, Mäklin gives 16 millim.; both have the front of the vertex broadly and deeply excavate as described by Mäklin[1]. The antennæ are slender in both sexes; in the male the anterior tibiæ are somewhat strongly sinuous and thickly clothed with silky hair within, and the inner side of all the femora and the metasternum in the middle densely pubescent. The smoother and deeply excavate head in both sexes, and the subquadrate and comparatively much smoother thorax readily distinguish *S. laterale* from *S. varians*.

42. Strongylium nubeculosum.

Strongylium nubeculosum, Mäkl. Monogr. p. 228; Act. Soc. Fenn. viii. part 1, p. 336[1].

Hab. Mexico, Yucatan (*Deyrolle*[1]); Nicaragua, Chontales (*Belt*).

A male and a female example of a *Strongylium* collected by the late Mr. Belt at Chontales agree very nearly with Mäklin's description of *S. nubeculosum*.

These specimens differ from *S. cruentatum* in their more slender antennæ and legs, duller and more coarsely punctured elytra, &c.; from *S. laterale* in the shallowly impressed vertex, and the duller elytra, the sutural patch on which is of a darker and fusco-violaceous tint and does not extend to the apex; and from *S. varians* in the smoother head and thorax, less elongate form, more quadrate and less transverse thorax, &c. The male and female scarcely differ in the shape of the elytra; in the female example the thorax is obsoletely margined towards the base; in the male the fifth ventral segment is semicircularly depressed in the middle at the base (perhaps accidentally) and shallowly impressed in the middle behind. These specimens vary from 12–12⅓ millim. in length, Mäklin gives 10½ millim.

43. Strongylium varians. (Tab. XV. fig. 21, ♀.)

Very elongate, subcylindrical, metallic green or cyaneous, moderately shining. Head coarsely and usually very rugosely punctured, sometimes closely and coarsely so with the intraocular space smoother, at most shallowly longitudinally impressed (often nearly flat) between the eyes, the latter moderately large and widely separated; antennæ long and slender in the male, shorter and rather stouter in the female, joints 3 and 4 long, subequal, the penultimate joints very much longer than broad in the male,

joints 1–4 bright metallic green, the rest dull piceous, the apical joint often more or less ferruginous; prothorax short, transverse, usually very strongly so in the male, convex, the sides immarginate, a little rounded and narrowing anteriorly, and nearly straight behind with the hind angles rectangular (sometimes sinuate behind, with the hind angles acute), the apex straight, the base slightly sinuate, both strongly margined, the anterior angles obtuse, the disc usually rather deeply impressed and canaliculate before the base, sometimes canaliculate in front, and often irregularly depressed on each side about the middle (in some coarsely sculptured male examples with an irregular, smooth, narrow, slightly raised longitudinal space in the middle), the basal foveæ deep, the surface usually coarsely but rather sparingly and irregularly punctured (in some males exceedingly coarsely, in some females more finely and sparingly so); scutellum subtriangular, sparingly punctured, greenish or cyaneous; elytra very long, distinctly narrower in the male, subparallel to far beyond the middle, if anything widest at the extreme base, the apices slightly produced, striate-punctate, the punctures rather coarse but not deep, closely approximate, and usually strongly transverse, and becoming finer towards the apex, the interstices smooth, slightly raised on the disc and convex towards the sides and apex, the surface red, reddish-testaceous, or testaceous, with a very broad cyaneous or greenish-violaceous sutural stripe (reaching to the fifth row of impressions) extending from a little below the scutellum to the apex, the lateral margins posteriorly and the epipleuræ usually violaceous; beneath pubescent, bright metallic green or cyaneous, comparatively coarsely and closely punctured, the sides of the metasternum and the flanks of the prothorax very coarsely so; legs long and rather slender, very coarsely punctured, slightly pubescent, bright metallic green or cyaneous, the first joint of the posterior tarsi rather longer than the apical joint; anterior tibiæ slightly curved and a little sinuate and somewhat thickly clothed with hair within, and the inner edge of all the femora thickly clothed with hair, in the male, the fifth ventral segment flattened only in this sex.

Length 11–14 millim.; breadth 3–4½ millim. (♂ ♀.)

Hab. MEXICO, Orizaba (*Sallé*), Misantla (*Höge*); BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*); GUATEMALA, Sabo, Sinanja, Senahu, San Juan in Vera Paz (*Champion*).

Var. *α*. The sutural stripe of the elytra much narrower; the prothorax more finely and more sparingly punctured.

Hab. BRITISH HONDURAS (*Blancaneaux*); GUATEMALA, Panzos and San Juan in Vera Paz (*Champion*). Four females.

Var. *β*. The elytra metallic green, violaceous at the apex, with a reddish-testaceous humeral patch extending inwards nearly to the scutellum and laterally to about the middle; the hind angles of the prothorax acute.

Hab. MEXICO, Cerro de Plumas (*Höge*). One immature female.

Var. *γ*. The elytra pale, testaceous, the suture narrowly fuscous; the hind angles of the prothorax acute. (Tab. XV. fig. 22, ♂.)

Hab. GUATEMALA, Sinanja (*Champion*). Three males.

The large number of specimens I refer to this species vary considerably *inter se*, but I am unable to separate them; the description is taken from Guatemalan examples. Both sexes were collected together by myself in several localities on the Guatemalan Atlantic slope, and the pallid variety *γ* in company with the type. The specimens before me from Mexico and British Honduras are all females, and differ a little from the others; the examples from Orizaba in the Sallé collection (labelled *S. laterale*, Mäkl.) and the variety *β* have the thorax obsoletely margined at the sides towards the base; the variety *β* may possibly represent another species. In most of the specimens I

have examined the sixth (and usually hidden) ventral segment projects beyond the fifth segment and is distinctly visible.

A typical female from Senahu and a male of the variety γ from Sinanja are figured.

44. **Strongylium misantlæ.** (Tab. XV. fig. 23, ♂.)

Moderately elongate, not very convex, metallic green or bluish-green. Head very closely and coarsely punctured (in some examples confluently, in others more sparingly so, between the eyes), the intraocular space sometimes longitudinally grooved in the middle, the eyes rather small and widely separated; antennæ rather slender, widening a little outwardly, in the male long, reaching to one third of the length of the elytra, in the female much shorter, joints 3 and 4 long, subequal, the penultimate joints much longer than broad, the extreme apex often testaceous; prothorax strongly transverse in the male, rather longer in the female, moderately convex, the base feebly bisinuate, the apex straight, the sides a little rounded about the middle and slightly narrowing in front, the anterior angles obtuse, the hind angles subrectangular or acute, the basal foveæ deep, the disc irregularly and obliquely impressed on each side and sometimes shallowly canaliculate towards the base, the surface rather uneven and very coarsely, closely, and irregularly punctured, the punctures sometimes shallower and more scattered in the female; scutellum triangular, impressed in the middle behind, variable in colour but usually obscure red; elytra moderately long, not very convex, comparatively broad, deeply and very coarsely striate-punctate (the punctures approximate and more or less transverse), the interstices rather convex towards the sides and strongly so at the apex, smooth, the surface red or reddish-testaceous, with a metallic green or bluish-green very broad sutural stripe extending from a little below the scutellum to the apex, the stripe usually narrowing towards the base; beneath bright greenish-æneous, almost glabrous, sparingly punctured; the anterior and intermediate tibiæ a little curved, the inner edge of the former slightly sinuous, and the posterior tibiæ somewhat strongly sinuate, in the male, the fifth ventral segment unimpressed as in the female.

Length 9–11½ millim.; breadth 3¼–4½ millim. (♂ ♀.)

Hab. MEXICO, Misantla (*Höge*), Panistlahuaca (*Sallé*); GUATEMALA, San Juan in Vera Paz (*Champion*).

Var. α. The prothorax suffused with red on each side of the disc; the rest as in the type.

Hab. GUATEMALA, Zapote (*Champion*). One female example.

Var. β. The elytra narrowly red at the sides for two thirds only of their length; the prothorax marked as in α.

Hab. GUATEMALA, Capetillo (*Champion*). One male example.

Var. γ. The elytra entirely of a violaceo-cupreous tint; the prothorax marked as in α and β. (Tab. XVI. fig. 3, ♂.)

Hab. GUATEMALA, Capetillo (*Champion*). A single male.

I am unable to refer this insect to either of the species described by Mäklin. It is perhaps nearest allied to *S. discoidale*, and like that species usually has the scutellum red in colour; but is separated by the different system of coloration of the elytra, by the longer antennæ, by the thorax being wider at the base, &c. From *S. laterale* and its allies it is distinguished by its shorter and more depressed form, comparatively shorter and broader and more coarsely striate-punctate elytra, &c. Found in abundance by Herr Höge at Misantla; the single example in the Sallé collection is labelled *S. cinctum*, Mäkl., but does not agree with the description of that species.

The specimens from Guatemala are somewhat aberrant, but I am unable to satisfactorily separate them. We figure an example of the typical form from Misantla, and one of the var. γ from Capetillo.

45. **Strongylium cinctum.** (Tab. XV. fig. 24, ♀.)

Strongylium cinctum, Mäkl. Monogr. p. 229; Act. Soc. Fenn. viii. part 1, p. 337[1].

Hab. Mexico, Cordova (*Sallé*[1]), Cerro de Plumas, Misantla (*Höge*).

If I have rightly identified this species, *S. cinctum* is at once separated from the allied forms by the exceedingly close, shallow, uniform punctuation of its regularly convex thorax. The elytra are nigro-æneous in tint, with the base and the lateral margins to beyond the middle red. The general shape is linear-elongate.

An example from Misantla is figured.

46. **Strongylium marginale.** (Tab. XV. fig. 25, ♀.)

Strongylium marginale, Mäkl. Monogr. p. 230; Act. Soc. Fenn. viii. part 1, p. 338[1].

Hab. Mexico, Cordova (*Sallé*[1]).

A long and narrow species; the thorax usually deeply impressed on each side of the disc in the middle; the elytra very long and cylindrical and with the apices somewhat produced, testaceous in colour, with a broad obscure bluish-violet sutural stripe extending from a little below the base to the apex and there confluent with a narrow similarly-coloured marginal stripe which extends upwards nearly to the shoulders.

†† *Eyes larger, subapproximate.*

47. **Strongylium limitatum.**

Strongylium limitatum, Mäkl. Monogr. p. 234; Act. Soc. Fenn. viii. part 1, p. 342[1].

Hab. Mexico (*Deyrolle*[1]), Cordova (*Sallé*), Cerro de Plumas, Misantla (*Höge*).

S. limitatum is separated from its rather numerous allies by its narrow form; the large and approximate eyes; the very short thorax, the sides of which are toothed in the middle and the anterior angles prominent; and the sides and base of the elytra more or less broadly red.

48. **Strongylium suturale.** (Tab. XVI. fig. 5, ♂.)

Strongylium suturale, Mäkl. Monogr. p. 229; Act. Soc. Fenn. viii. part 1, p. 337[1].

Hab. Mexico, Cordova (*Sallé*[1]); Guatemala, Panzos and San Juan in Vera Paz (*Champion*).

A single female example in the Sallé collection, labelled *S. limitatum*, is perhaps referable to this species. Two small male examples from Guatemala differ from the description in having the thorax more coarsely and closely punctured; these specimens are 6⅔ millim. only in length. *S. suturale* is allied to *S. limitatum* in its approximate eyes, but differs in the less prominent anterior angles and the more rounded sides (not armed with a small tooth) of the thorax.

The example from Panzos is figured.

b. *Elytra moderately long, with an oblique reddish-testaceous stripe extending from the shoulders nearly to the apex.*

49. Strongylium discoidale.

Strongylium discoidale, Mäkl. Monogr. p. 231; Act. Soc. Fenn. viii. part 1, p. 339[1].

Hab. Mexico, Cordova (*Sallé*[1]).

This species is allied to *S. marginale*; but the thorax is shorter and very coarsely punctured; the scutellum is red; and the elytra are much shorter, somewhat similarly striped, and, like the rest of the surface, greenish-æneous in tint.

50. Strongylium curticorne. (Tab. XVI. fig. 6, ♂.)

Moderately elongate, subcylindrical, not very convex, bluish-violet, rather dull. Head very coarsely and closely punctured, the epistoma more finely and sparingly so, shallowly longitudinally impressed between the eyes, the latter rather small and widely separated; antennæ (♂) short, stout, joint 4 triangular, rather shorter but very much wider than 3, joints 5–10 wider than 4, equal in width and subtransverse, 11 rather longer than 10 and short ovate; prothorax a little broader than long, rather convex, the sides very obsoletely margined about the middle (the indistinct margin not visible from above), slightly rounded, and narrowing a little in front, the base and apex straight, the anterior angles obtuse, the hind angles subrectangular, the basal foveæ shallow, the disc impressed in the middle behind, the surface very coarsely and closely punctured; scutellum greenish, slightly impressed; elytra narrow, moderately long, a little depressed on the disc, somewhat coarsely striate-punctate (the punctures approximate, and transverse in shape), the interstices a little convex towards the sides and strongly so at the apex, almost smooth, the surface reddish-testaceous, with a broad bluish-black sutural stripe extending from a little below the scutellum to the apex and there confluent with a similarly-coloured marginal stripe extending upwards to within a short distance of the base; beneath more shining, slightly pubescent, the sides of the meso- and of the metasternum and the side pieces, and the flanks of the prothorax exceedingly coarsely, the ventral surface finely, punctured; legs short (the tibiæ especially) and comparatively stout, coarsely punctured, the first joint of the posterior tarsi as long as the apical one; the tibiæ a little curved and the anterior and posterior pairs pubescent within in the male.

Length 8 millim.; breadth 2½ millim. (♂.)

Hab. Mexico, Tapachula in Chiapas (*Höge*).

A single example found by Herr Höge on the lower part of the South Mexican Pacific slope. *S. curticorne* can be at once separated from the numerous allied forms by its comparatively short legs and antennæ; in the system of coloration of its elytra it resembles *S. marginale*.

c. *Elytra shorter, coarsely punctured, with the base, the lateral margins in front, and a short basal streak on each, red; eyes small.*

51. Strongylium ramosum. (Tab. XVI. fig. 7, ♂.)

Strongylium ramosum, Mäkl. Monogr. p. 232; Act. Soc. Fenn. viii. part 1, p. 340[1].

Hab. Mexico (*coll. F. Bates*), Cordova (*Sallé*[1]), Cerro de Plumas (*Höge*).

d. *Elytra rather short, coarsely punctured, with the lateral margins and a broad subsutural stripe reddish-testaceous; eyes small.*

52. **Strongylium blandum.** (Tab. XVI. fig. 8, ♀.)

Strongylium blandum, Mäkl. Monogr. p. 233; Act. Soc. Fenn. viii. part 1, p. 341 [1].
Stenochia blanda, Dej. Cat. 3rd edit. p. 232 [2].

Hab. Mexico [1 2] (*coll. F. Bates*), Cordova, Tuxtla (*Sallé*), Cerro de Plumas (*Höge*).

This species is separated from the closely allied *S. ramosum* by the rather shorter form, and by the more strongly raised interstices and the coarser and deeper punctuation of the elytra; the latter vary a good deal in the extent of the darker markings. We figure a female example from Cordova.

Elytra coarsely striate-punctate, the punctures usually transverse and approximate, the interstices flat or but little raised; upper surface (except in S. armatum, var.) *greenish-æneous, sometimes with a translucent reddish-brown tinge; size moderate or small.*

† *Eyes more or less large and approximate.*

53. **Strongylium impressicolle.** (Tab. XVI. fig. 9, ♂.)

Strongylium impressicolle, Mäkl. Monogr. p. 193; Act. Soc. Fenn. viii. part 1, p. 301 [1].

Hab. Mexico [1], Ventanas (*Forrer*), Cordova, Tuxtla, Playa Vicente (*Sallé*), Misantla, Cerro de Plumas (*Höge*); Guatemala, San Juan in Vera Paz, Zapote (*Champion*); Nicaragua, Chontales (*Janson*).

Var.? The prothorax armed at the sides with two contiguous median teeth, the anterior angles prominent.

Hab. Guatemala (*Sallé*). One example.

Var.? The prothorax armed at the sides with a strong median tooth; the legs and antennæ fusco-testaceous, the former and the base of the latter suffused with golden-green.

Hab. Nicaragua, Chontales (*Belt*). One female example.

Found in abundance by Herr Höge at Misantla. In the long series of examples from this locality the thorax varies considerably in shape, the sides being usually rounded, though often subangularly dilatate about the middle. *S. impressicolle* is distinguished by its moderately shining greenish-æneous surface, the elytra usually in great part suffused with reddish-brown; it is the largest of several allied species (though quite small examples occur) inhabiting our region, and principally identified by the eyes being very large and sub-approximate, the thorax transverse, comparatively finely though closely punctured, and usually with a broad transverse arcuate impression on the disc behind, and the elytra with rows of moderately coarse transverse impressions. The ventral surface is rather closely and somewhat coarsely punctured; the fifth ventral segment impressed in the middle behind in both sexes (as in *S. languidum*), &c.

A male individual from Misantla is figured.

54. Strongylium languidum.

Strongylium languidum, Mäkl. Monogr. p. 204; Act. Soc. Fenn. viii. part 1, p. 312 [1].

Hab. MEXICO, Cordova, Tehuantepec (*Sallé* [1]); GUATEMALA, Zapote, Capetillo, Senahu, Sinanja (*Champion*).

According to two examples labelled *S. languidum* in the Sallé collection (a third so labelled is here referred to *S. impressicolle*), this species differs from *S. armatum* in the rather less approximate eyes. The armature of the sides of the thorax, when a large number of examples from the same locality are examined, proves to be a variable character, and some specimens here referred to *S. languidum* have the sides as strongly toothed as in *S. armatum*, while in others the median tooth is obsolete; the anterior angles of the thorax are less prominent in *S. languidum*. The ventral surface is more finely punctured than in *S. armatum*.

The Guatemalan examples have the eyes comparatively widely separated (especially noticeable in the female), and differ a little in other respects; I do not think, however, that they represent more than a variety of *S. languidum*.

The North-American *S. crenatum*, Mäkl., is an ally of this species.

55. Strongylium armatum. (Tab. XVI. fig. 10, ♀, var.)

Strongylium armatum, Mäkl. Monogr. p. 203; Act. Soc. Fenn. viii. part 1, p. 311 [1].

Hab. MEXICO, Cordova (*Sallé* [1]), Cerro de Plumas, Tapachula in Chiapas (*Höge*); GUATEMALA, San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

This species is separated from *S. impressicolle*, if I have identified that insect correctly, by the smaller size, more linear shape, more coarsely punctured elytra, rather smaller eyes (in the male separated only by an exceedingly narrow space), and much more coarsely punctured ventral surface; as well as by the toothed sides of the thorax, a character, however, sometimes present in *S. impressicolle*; both species usually have the anterior angles of the thorax a little prominent. Two examples, one from Cordova (figured on our Plate) and one from San Juan, have the suture and the lateral margins of the elytra reddish, thus very nearly approaching *S. limitatum* in colour; *S. armatum* is, however, distinguished from that species by the red suture and more coarsely punctured elytra.

56. Strongylium oculatum.

Resembling *S. languidum*, and differing as follows:—The antennæ longer in both sexes, particularly in the female; the eyes larger and closely approximate in the male, narrowly separated in the female; the prothorax more rounded at the sides, the anterior angles rounded or indistinct, the hind angles subacute, the sides armed with a very short feeble tooth in the middle; the upper surface usually golden-bronze in tint; the rest very much as in *S. languidum*.

Length $7\frac{1}{4}$–$8\frac{1}{2}$ millim.; breadth $2\frac{1}{4}$–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. GUATEMALA, Yzabal (*Sallé*); NICARAGUA, Chontales (*Belt, Janson*).

Six specimens. This insect, though closely allied to *S. languidum*, is sufficiently distinct to be separated therefrom.

57. **Strongylium brevipes.** (Tab. XVI. fig. 11, ♂.)

Upper surface as in *S. oculatum*; the eyes large and approximate in both sexes; the antennæ much shorter and stouter, in the female the penultimate joints as broad as long; the prothorax with the hind angles subrectangular and usually less acute than in *S. oculatum*; the legs (especially the tarsi) shorter in both sexes, the first joint of the posterior tarsi comparatively much shorter; the ventral surface very much more coarsely punctured.

Length 7–8 millim.; breadth $2\frac{1}{4}$–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Belt*); PANAMA, Volcan de Chiriqui (*Champion*).

Five examples. Until the corresponding sexes are compared this insect, at first sight, resembles *S. oculatum* so closely as to be easily mistaken for the female of that species. The short tarsi and antennæ and the very coarsely punctured ventral surface (resembling *S. armatum*) are the chief characters of *S. brevipes*. Two examples differ from the others in having the under surface and the thorax cyaneous or greenish-æneous, and the elytra suffused with reddish-brown. *S. brevipes* is separated from *S. gregarium* by the large approximate eyes, the flatter elytral interstices, and the much smoother ventral surface.

A Chontales specimen is figured.

†† *Eyes much smaller; upper surface rather more depressed; head very rugosely punctured; the basal half of the femora testaceous.*

58. **Strongylium angustulum.**

Strongylium angustulum, Mäkl. Monogr. p. 206; Act. Soc. Fenn. viii. part 1, p. 314 [1].

Hab. PANAMA, Caldera in Chiriqui 1200 feet (*Champion*).—COLOMBIA [1].

Three examples of a *Strongylium* collected by myself in Chiriqui agree very nearly with Mäklin's description of *S. angustulum*. From *S. languidum* and its allies these specimens are separated by the more coarsely and more rugosely punctured head and thorax, the more widely separated eyes, the femora testaceous in their basal half, the under surface duller and in great part reddish-brown, the ventral surface more finely and sparingly punctured, and the elytra with a more translucent brownish tinge, and the suture narrowly suffused with fusco-violaceous. In the male the fifth ventral segment is largely depressed in the middle behind. Mäklin gives the length as 9 millim.; our examples measure $7\frac{1}{3}$–$7\frac{2}{3}$ millim.

The allied *S. punctatissimum*, Mäkl., from Brazil, is much more coarsely punctured beneath, though very similar above.

Elytra much as in S. impressicolle, &c., *but more convex and more coarsely punctured, the alternate interstices subcostate; size small.*

† *Eyes small, distant.*

59. **Strongylium gregarium.** (Tab. XVI. fig. 12, ♂.)

Moderately elongate, rather convex, greenish-æneous, with a translucent brownish tinge, slightly shining. Head coarsely and closely punctured, impressed between the eyes, the latter rather small but convex and somewhat narrowly separated in both sexes; antennæ rather stout, moderately long, widening outwardly, joints 3 and 4 about equal in length, the penultimate joints longer than broad, the apical joint rather large and ovate, piceous or dark reddish-brown; prothorax transverse, convex, the sides immarginate, slightly crenulate, rounded, narrowing a little in front, and about equally narrowing and sinuate behind, the base and apex nearly straight, the hind angles rectangular or subacute, the anterior angles obtuse, the disc deeply canaliculate in front and shallowly so behind, the basal foveæ shallow and ill-defined, the surface uneven and exceedingly coarsely and closely punctured, the punctures here and there confluent; scutellum subtriangular, almost smooth; elytra comparatively rather short, subparallel in their basal half, very coarsely and deeply striate-punctate, the punctures subtransverse or rounded and subapproximate, the interstices smooth and slightly raised, the alternate ones (especially the third) more distinctly so, the surface greenish-æneous, sometimes brownish; beneath almost glabrous, moderately shining reddish-brown, much suffused with greenish-æneous towards the sides, finely and sparingly punctured, the metasternum in front much more coarsely so, the sides of the latter and the flanks of the prothorax very coarsely punctured; legs moderately long, rather stout, sparingly but rather coarsely punctured, greenish-æneous, the tibiæ often reddish-brown, the tarsi piceous, the first joint of the posterior tarsi much shorter than the apical joint.

Length 5–7 millim.; breadth $1\frac{2}{3}$–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Found in abundance by myself on the slope of the Volcan de Chiriqui. *S. gregarium* is separated from *S. languidum*, *S. armatum*, and their allies by the less elongate shape, the smaller eyes, the elytra shorter, with less approximate, deeper, and more rounded impressions, and the alternate interstices a little raised, the legs smoother, and the ventral surface much more finely punctured. From *S. permodicum* and *S. punctipes* it is distinguished by the less widely separated eyes in both sexes; the shorter and more closely (but equally coarsely) punctured thorax; the very much narrower and less raised alternate interstices of the elytra, the sutural space narrow, the punctures coarser, more rounded, and less approximate; and also by the shorter and more convex general form and the greenish-æneous surface.

†† *Eyes larger, more approximate.*

60. **Strongylium erraticum.**

Resembling *S. permodicum*, Mäkl., and differing as follows:—The head very unequally punctured, the anterior part very sparingly and rather finely, the hinder part very coarsely and rugosely so, the intraocular impression deeper, the eyes much larger and more approximate; the antennæ (♂) stouter, with joints 7–9 subtriangular; the prothorax more convex, rounded at the sides, about equally narrowing before and behind, the surface still more coarsely, rather more closely, and more irregularly punctured; the elytra more elongate, with the alternate interstices raised, but not distinctly broader than the others (much broader

in *S. permodicum*), the punctures much coarser and deeper, and less approximate, though fine, shallow, and more scattered at the apex; the fifth ventral segment more deeply impressed in the middle behind in the male; the rest much as in *S. permodicum*.

Length $6\frac{2}{3}$ millim.; breadth 2 millim. (♂.)

Hab. NICARAGUA, Chontales (*Janson*).

A single example. This insect is almost intermediate between *S. permodicum* and *S. gregarium*, but quite distinct from either. The stouter antennæ (♂), the larger and more approximate eyes, the more coarsely and less closely punctured and less transverse thorax, the much longer elytra, and the more coarsely and more closely punctured under surface separate it from *S. gregarium*.

Elytra rather short, very coarsely striate-punctate, the alternate interstices narrowly costate; eyes large, approximate; upper surface greenish-æneous, the elytra testaceous, with a subapical patch on each and the suture fusco-violaceous; size small.

61. **Strongylium carinipenne.** (Tab. XVI. fig. 13, ♂.)

Moderately elongate, slightly convex, dull greenish-æneous. Head in front bright æneous and closely and rather coarsely punctured, behind dull and very coarsely and rugulosely punctured, shallowly impressed between the eyes, the latter large and approximate; antennæ (♂) moderately long, rather stout, joint 4 about as long as but broader than 3, subtriangular, joints 5–10 nearly equal in length, widening very slightly outwardly, each nearly as broad at the base as at the apex, all longer than broad, 11 oblong-ovate, longer than 10, 1–3 greenish-æneous, the rest dull black; prothorax subquadrate, strongly transverse, the sides immarginate, very feebly rounded, equally (but very slightly) narrowed before and behind, and armed in the middle with a sharp tooth, the base and apex nearly straight, the anterior angles rounded, the hind angles rectangular, the basal foveæ moderately deep, the disc almost unimpressed, the entire surface rather uneven and (like the vertex) very coarsely and rugulosely but somewhat shallowly punctured; scutellum triangular, smooth, very shining, metallic green; elytra moderately long, subparallel to beyond the middle, a little depressed on the disc, very coarsely striate-punctate throughout, the punctures transverse in shape and approximate, and very little finer at the apex, the interstices smooth, narrow, the third, fifth, and seventh costate from the base to the apex, the others a little raised at the sides and apex, the smooth sutural space broad, the surface shining, testaceous, the suture and an ill-defined patch on the disc of each towards the apex fusco-violaceous; beneath almost glabrous, bright greenish-æneous, sparingly but rather coarsely punctured, the sides of the metasternum and the flanks of the prothorax very coarsely so; legs moderately long, very coarsely punctured, bright greenish-æneous, the coxæ, the femora towards the base, and the tibiæ in part obscurely reddish, the tarsi piceous; the first joint of the posterior tarsi shorter than the apical joint; the tibiæ almost straight, and the fifth ventral segment shallowly transversely impressed in the middle behind, in the male.

Length $7\frac{2}{3}$ millim.; breadth $2\frac{1}{2}$ millim. (♂.)

Hab. PANAMA, Bugaba (*Champion*).

This is a small species somewhat resembling *S. armatum*: it differs in the thorax being duller and much more closely and rugulosely punctured; the elytra shorter, with the alternate interstices costate, the surface testaceous, with the suture and a subapical patch on the disc of each fusco-violaceous, the sutural space broad and smooth (as in *S. permodicum*, &c.); the eyes are large and approximate as in *S. armatum*. *S. carinipenne*, except in the colour of the elytra, also approaches several South-American species described by Mäklin, but does not agree with any of them.

Elytra with the alternate interstices wider and a little raised; eyes small or moderate, more or less widely separated; upper surface unicolorous, bronze; size small or moderate.

62. **Strongylium punctipes.** (Tab. XVI. fig. 14, ♂.)

Moderately elongate, somewhat depressed, rather dull brownish-æneous, with a slight greenish tint. Head coarsely and very closely punctured, shallowly impressed between the eyes, the latter rather large and convex and not very widely separated; antennæ rather short, widening a little outwardly, joints 3 and 4 rather long, subequal, the penultimate joints longer than broad, black, tinged with æneous towards the base; prothorax small and narrow, strongly transverse, the sides slightly crenulate, immarginate, a little rounded and narrowed in front and nearly straight behind, the base and apex nearly straight, both strongly margined, the hind angles rectangular or subacute, the anterior angles slightly prominent, the disc longitudinally impressed in the centre behind and with a shallow irregular depression on each side about the middle, the basal foveæ deep, the surface rather uneven and very coarsely and closely punctured, the punctures here and there confluent; scutellum subtriangular, flat, sparingly punctured; elytra rather long, subparallel to beyond the middle, somewhat depressed on the disc, striate-punctate, the punctures strongly transverse and approximate and moderately deep and coarse, the interstices almost smooth and quite narrow, the alternate ones rather broader and slightly raised (more strongly so towards the apex); beneath pubescent, comparatively coarsely and closely punctured, bright greenish-æneous; epipleuræ extending to the apex of the elytra; legs slightly pubescent, rather long and slender, closely and coarsely punctured, greenish-æneous, the basal half of the femora and the tibiæ more or less reddish, the tarsi bluish-black, the first joint of the posterior tarsi rather shorter than the apical joint; the fifth ventral segment in the male with a broad transverse semicircular impression in the middle behind, the anterior tibiæ nearly straight in this sex.

Length 7–8½ millim.; breadth 2⅓–2⅔ millim. (♂.)

Hab. GUATEMALA, near the city, Aceytuno (*Salvin*).

Two examples, apparently both males. *S. punctipes* is allied to *S. permodicum*, but differs as follows:—the eyes are larger and more approximate; the thorax is smaller, strongly transverse, more narrowed and rounded anteriorly, and more closely though equally coarsely punctured; the elytra are more depressed, and have the very slightly raised alternate interstices narrower; the under surface is bright greenish-æneous (not dull bronze), pubescent, and more coarsely punctured; and the legs are very coarsely and closely punctured. From *S. languidum* and its allies it is separated by the wider and slightly raised alternate elytral interstices, as well as by other characters.

I did not myself meet with this species in Guatemala.

63. **Strongylium subcostatum.** (Tab. XVI. fig. 15, ♂.)

Strongylium subcostatum, Mäkl. Monogr. p. 208; Act. Soc. Fenn. viii. part 1, p. 316[1].

Hab. MEXICO (*coll. Chevrolat*[1]); GUATEMALA, Panzos, Teleman, and San Juan in Vera Paz (*Champion*).

I have not seen this species from Mexico; but an insect found in plenty by myself in various places on the lower part of the Guatemalan Atlantic slope agrees with Mäklin's description. *S. subcostatum* is one of numerous closely-allied Tropical-American species, distinguished by their æneous or greenish-æneous surface; coarsely

and rugulosely punctured head and thorax; and coarsely striate-punctate elytra (the punctures transverse in shape and approximate), the third, fifth, and seventh interstices of which are wider than the others, and, like the suture, more or less raised or costate. This species is the largest of the known forms of this group. An example from San Juan is figured.

64. **Strongylium permodicum.**

Strongylium permodicum, Mäkl. Monogr. p. 212; Act. Soc. Fenn. viii. part 1, p. 320[1].

Hab. Guatemala[1], Zapote (*Champion*); Nicaragua, Chontales (*Belt*); Panama (*coll. F. Bates*), Bugaba, Volcan de Chiriqui, La Caldera (*Champion*).—Colombia (*coll. F. Bates*).

This species is generally distributed in our region from Guatemala southwards, and extends into Southern Colombia. *S. permodicum* differs from the closely allied *S. exile*, Mäkl., from Colombia, Venezuela, and Bolivia, in the more coarsely sculptured upper surface (especially of the thorax), and in the more sparingly punctured under surface; the legs, moreover (judging from two examples, one from Cartagena and another from Cumana, before me of what I suppose to be *S. exile*), are very much smoother, and not closely and coarsely punctured as in *S. exile*. Smaller, narrower, and less convex than *S. subcostatum*, the upper surface less shining.

65. **Strongylium cancellatum.**

Strongylium cancellatum, Mäkl. Monogr. p. 212; Act. Soc. Fenn. viii. part 1, p. 320[1].
Stenochia costato-striata, Chevr. in litt.

Hab. Mexico[1], Jalapa (*Höge*); British Honduras, R. Hondo (*Blancaneaux*).

The three examples I refer to this species differ from *S. exile* in having the surface of a much darker bronzy tint, and more coarsely punctured; and also in the elytra having all the interstices a little raised, the wider alternate ones still more strongly so.

Elytra long, rather depressed, foveolate-striate almost to the apex; eyes moderate; prothorax rugulosely punctured; legs and antennæ long and slender, the apical joint of the latter testaceous; upper surface dark greenish-bronze; size moderate.

66. **Strongylium apicicorne.** (Tab. XVI. fig. 16, ♂.)

Strongylium apicicorne, Mäkl. Monogr. p. 216; Act. Soc. Fenn. viii. part 1, p. 324[1].

Hab. Mexico, Cordova (*Sallé*[1]), Cerro de Plumas (*Höge*).

Found in abundance by Herr Höge at Cerro de Plumas. This species in many of its characters resembles *S. variicorne* and others placed nearer the beginning of the genus, but is a more fragile insect and has more depressed elytra. A specimen from Cerro de Plumas is figured.

Elytra shorter than in S. apicicorne, *similarly sculptured; eyes moderate; prothorax coarsely rugose; legs and antennæ shorter; upper surface obscure greenish-bronze; size small.*

67. **Strongylium fragile.** (Tab. XVI. fig. 17, ♂.)

Elongate, moderately convex, brownish-bronze, with an æneous or greenish-æneous tint, rather dull. Head very coarsely and rugosely punctured, scarcely impressed between the eyes, the latter rather large and somewhat narrowly separated; antennæ rather stout, widening outwardly, joints 3 and 4 about equal in length, 4 widening at the apex and wider than 3, the penultimate joints slightly longer than broad, the apical joint ovate in the female, oblong-ovate in the male, piceous, tinged with æneous towards the base, the apical two joints usually testaceous or ferruginous; prothorax transverse, convex, the sides immarginate, rounded, narrowing very little more in front than behind, and armed with a very short indistinct blunt tooth in the middle, the base a little sinuous, the apex straight, both strongly margined, the anterior angles obtuse, the hind angles subrectangular, the disc shallowly longitudinally impressed in the middle, the basal foveæ deep, the surface uneven and exceedingly coarsely and rugosely punctured, the interspaces here and there forming very irregular smooth raised prominences; scutellum subtriangular, finely punctured; elytra moderately long and convex, subparallel to beyond the middle, from the base to the apex with closely packed rows of deep coarse transverse or oblong excavations, the excavations frequently longitudinally confluent and at the extreme base punctiform, the interstices smooth, much raised, and more or less transversely confluent; beneath reddish-brown, suffused with greenish-æneous, moderately shining, almost glabrous, closely and comparatively coarsely punctured; legs moderately long, sparingly but rather coarsely punctured, reddish-brown, suffused with greenish-æneous, the tarsi piceous, the first joint of the posterior tarsi shorter than the apical joint; the fifth ventral segment with a shallow rounded impression in the middle behind in the male.

Length 6–8 millim.; breadth 2–2½ millim. (♂ ♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Numerous examples. In the elytral sculpture this species resembles *S. apicicorne*; it differs, however, from that species in its less elongate shape, much smaller size, shorter and stouter legs and antennæ, smoother legs, exceedingly rugose thorax, &c. The somewhat regularly reticulate interstices and the closely-packed rows of excavations on the elytra separate it at once from *S. variicorne*, &c.

OTOCERUS.

Oploptera, Chevrolat, in Guérin-Méneville's Icon., Ins. p. 125 (1846); Lacordaire, Gen. Col. v. p. 486 (1859) (nomen præocc.).

Hoploptera, Gemm. & Harold, Cat. vii. p. 2037.

Otocerus, Mäklin, Monogr. Strongyl. p. 376 (1864); Act. Soc. Fenn. viii. part 1, p. 484 (1867 (pars).

Fifteen species of this genus have been described, all from Tropical America, and numerous others exist in collections; the Brazilian *O. longipes* (Lucas) is here referred to *Pseudotocerus*. None have hitherto been recorded from our region, whence we have now to notice seven species. *Otocerus* is chiefly separated from *Strongylium* by the comparatively very short third joint of the antennæ; in the more typical species,

O. serraticornis (Chevr.), *O. dilaticornis*, &c., the inner apical angles of joints 4–10 are more or less strongly and angularly produced. The eyes are usually very large and approximate, though sometimes small and widely separated. The thorax in some species, *O. impressipennis*, *O. nicaraguensis*, &c., is margined at the sides, though the margin is not or only in part visible from above. The posterior femora are unarmed in our species. In the male of *O. hamatus* the anterior trochanters are produced into a sharp curved tooth. The genus is now known to range as far north as the low hot forest-region of Guatemala.

1. *Eyes large, approximate.*

a. *Anterior trochanters unarmed in the male.*

† *Elytra with the suture and lateral margins lighter or unicolorous.*

1. **Otocerus dilaticornis.** (Tab. XVI. fig. 18, ♂.)

Elongate, rather convex, brownish-piceous, slightly shining. Head large and broad, moderately finely and rather closely punctured in front, much more coarsely so behind, the intraocular space transversely impressed, the impression longitudinally grooved in the middle in front; eyes exceedingly large, extending laterally a little beyond the sides of the prothorax, approximate in front; antennæ (♂) long, very greatly dilated and serrate within from the fourth joint (joints 4–10 all strongly produced at their inner apical angle), joint 3 swollen at the apex, very short, joints 4–9 differing very little in length and width, 10 narrower than 9, 11 as long as but much narrower than 10, oblong ovate, obliquely truncate at the apex, 1–3 shining, 4–11 dull and coarsely and rugosely punctured, the extreme base and apex ferruginous, the rest black; prothorax rather narrow, moderately transverse, subquadrate, convex, a little flattened on the disc, the sides immarginate, nearly straight, and with a short blunt median tooth, the anterior angles rather broadly rounded, the hind angles subrectangular and extending outwards, the apex straight, the base feebly sinuate, both very strongly and completely margined, the disc canaliculate (except in front), broadly and shallowly depressed behind, and with a small deep rounded depression on each side about the middle, the basal foveæ large and deep, the surface sparingly and rather finely (but deeply) punctured; scutellum subtriangular, distinctly punctured; elytra long, subparallel in their basal third, the sides thence to the apex a little rounded and very gradually converging, deeply and rather coarsely crenate-striate, the crenate impressions coarsest a little below the base (from the third stria outwardly) and thence to the apex gradually becoming finer, the interstices almost smooth and strongly and equally convex throughout, the suture, lateral margins, and epipleuræ red; beneath moderately shining, finely and rather sparingly punctured, the sides of the metasternum and the flanks of the prothorax coarsely so; legs rather long, rather coarsely and closely punctured (the femora more shallowly so), reddish, the knees a little darker; the first joint of the posterior tarsi long, longer than the apical joint; anterior tibiæ slightly curved, and the fifth ventral segment broadly flattened in the middle, in the male.

Length 16 millim.; breadth $4\frac{1}{2}$ millim. (♂.)

Hab. Panama, Bugaba 1000 feet (*Champion*).

A single example. This species cannot be satisfactorily compared with any hitherto described, though it approaches the Brazilian *O. serraticornis* in some of its characters.

2. **Otocerus torolæ.** (Tab. XVI. fig. 19, ♂.)

Elongate, subcylindrical, moderately convex, unicolorous brownish-piceous, rather dull. Head large and broad, moderately coarsely and closely punctured in front, coarsely and rugosely so behind, the intraocular

space shallowly longitudinally impressed; eyes exceedingly large, transverse, approximate; antennæ rather short, moderately stout, joints 4–10 rather broad, flattened, each a little produced at their inner apical angle, 4 broader and very much longer than 3, 5–8 about equal in length and breadth, each much shorter than 4, 9 and 10 rather narrower, subequal, 11 oblong ovate, the joints brownish-piceous, the extreme base and apex ferruginous; prothorax large and broad, strongly transverse, not very convex, the sides immarginate, nearly straight (though feebly sinuate) behind, very slightly narrowed in front, and with a short sharp median tooth, the base bisinuate, the apex nearly straight, both very distinctly margined, the anterior angles rather prominent, the hind angles subacute, the basal foveæ large but shallow, the disc with traces of a smooth slightly depressed longitudinal groove behind and transversely depressed before the base, the surface uneven, and closely, irregularly, and somewhat coarsely punctured; scutellum triangular, almost smooth; elytra long, subparallel in their basal half, a little depressed on the disc, very coarsely and regularly crenate-striate, the crenate punctures becoming a little finer behind, the interstices almost smooth and regularly convex throughout; beneath more shining, sparingly (the ventral segments more coarsely at the sides) but somewhat coarsely punctured, the fifth ventral segment closely so, the sides of the metasternum and the flanks of the prothorax very coarsely punctured; legs moderately long and stout, very closely and coarsely punctured; the first joint of the posterior tarsi long, longer than the apical joint; anterior tibiæ nearly straight, and towards the apex thickly clothed with hair within, and the fifth ventral segment flattened in the middle behind, in the male.

Length 17 millim.; breadth $5\frac{1}{3}$ millim. (♂.)

Hab. GUATEMALA, Torola 1000 feet (*Champion*).

A single example, found by myself in the vicinity of Escuintla. The less strongly dilated antennæ, larger and broader and more coarsely punctured thorax, broader and more parallel and more coarsely crenate-striate elytra, shorter and more coarsely punctured legs, and other characters readily distinguish *O. torolæ* from *O. dilaticornis*.

3. **Otocerus nicaraguensis.** (Tab. XVI. fig. 20, ♂.)

Elongate, subcylindrical, convex, bright æneous, with cupreous or greenish tints. Head moderately coarsely and somewhat sparingly punctured, shallowly impressed between the eyes, the latter very large and subapproximate in the male, rather smaller and more distant in the female; antennæ in the male long and rather slender, joint 3 short, joints 7–10 about equal in width, very much longer than broad, slightly decreasing in length outwardly, 4–10 a little extended at their inner apical angle, 11 as long as 10 and bluntly rounded at the apex—in the female shorter and more distinctly widening outwardly, the penultimate joints much shorter and subtriangular, the apical joint ovate—brownish or piceous, the extreme apex lighter, the basal three joints greenish-æneous; prothorax transversely convex, broad, strongly transverse, subquadrate, the sides very finely margined (the margin not visible from above), almost straight (though usually a little sinuate), and quite as broad (or broader) in front as at the base, the apex nearly straight in the middle, the base slightly sinuous, the former in the centre and the latter very strongly margined, the anterior angles rounded but rather obliquely cut off in front (when viewed from above) and a little prominent, the hind angles sharply rectangular or subacute, the disc obsoletely canaliculate, somewhat deeply so behind, with a deep rounded fovea on each side a little behind the middle, and strongly transversely impressed before the base, the basal foveæ very deep and connected by the basal depression, the surface somewhat coarsely and deeply but rather sparingly punctured; scutellum subtriangular, sparingly punctured; elytra moderately long, subparallel in their basal half, more convex towards the base, somewhat depressed a little behind the scutellum, finely striate-punctate, more coarsely so outwardly in the anterior half, the punctures oblong in shape and approximate and towards the apex becoming finer and shallower, the scutellar row very deeply impressed, the interstices broad, almost smooth, and strongly convex throughout, the surface greenish-æneous, the raised interspaces more or less cupreous, the apices rounded; beneath glabrous, bright greenish-æneous, sparingly (the fifth ventral segment more closely) but not very finely punctured, the flanks of the prothorax and the sides of the metasternum coarsely so;

prosternum subhorizontal, the apex convexly produced and received by the broadly and moderately deeply excavate mesosternum; legs moderately long, rather coarsely but not very closely punctured, more or less æneous, the first joint of the posterior tarsi longer (in the male much longer) than the apical joint; the anterior tibiæ nearly straight, but with their inner edge a little sinuous, and the fifth ventral segment with a large semicircular impression in the middle behind (in the female merely flattened), in the male.

Length $11\frac{2}{3}$–15 millim.; breadth 4–5 millim. (♂ ♀.)

Hab. NICARAGUA (*Sallé*), Chontales (*Belt*, *Janson*).

Numerous examples of both sexes. This is one of the large number of interesting species known only as yet from Nicaragua. The cylindrical shape, bright æneous surface, short subquadrate and finely margined thorax, and convex elytral interstices readily separate *O. nicaraguensis* from the other species here described.

†† *Elytra with interrupted longitudinal testaceous streaks.*

4. **Otocerus interruptus.** (Tab. XVI. fig. 21, ♀.)

Elongate, a little convex, somewhat flattened above, greenish-æneous, rather dull. Head in front closely and somewhat coarsely punctured, behind exceedingly coarsely and rugosely so, shallowly longitudinally impressed between the eyes, the latter very large, convex, and approximate (separated only by a very narrow space); antennæ (♀) rather short, stout, subserrate within (the inner apical angle of each joint angularly produced) from the fourth joint, the latter nearly twice as long as and much wider than the third joint, joints 6–8 the longest and widest, subequal, 9 and 10 narrower than 8, and decreasing slightly in length and breadth, 11 rather longer than 10, bluntly and obliquely rounded at the apex, the joints dull black, a little lighter at the base; prothorax rather flat, broad, strongly transverse, the sides immarginate, about equally, but very slightly, narrowing in front and behind, and armed a little before the middle with a strong blunt tooth, the base and apex slightly sinuate, the latter acutely margined throughout, the basal foveæ large and deep but irregular, the anterior angles laterally prominent, the hind angles subacute and outwardly directed, the disc broadly but irregularly canaliculate and irregularly depressed on each side, the entire surface uneven and exceedingly rugosely punctured; scutellum subtriangular, sparingly punctured, shining; elytra moderately long, the disc broadly flattened towards the base, parallel in their basal third, thence rounded and converging to the apex, crenate-striate, the punctures approximate, coarse, and more transverse in shape towards the base, and outwards from the middle rapidly becoming very much finer and shallower, the interstices very strongly raised and convex (the first and second flatter) throughout, and very sparingly and minutely punctured, the surface greenish-æneous, shining, the third to the seventh interstices in part testaceous, the testaceous colour not extending to the base on the third and fourth interstices, and more or less interrupted on the others at and behind the middle; beneath reddish-brown, rather dull, almost glabrous, shallowly and sparingly but somewhat coarsely punctured, the sides of the metasternum and the flanks of the prothorax very coarsely so; legs rather long, very closely and roughly punctured, dull brownish-piceous, the femora and tibiæ at the base reddish; the first joint of the hind tarsi very long, longer than the apical joint.

Length 14 millim.; breadth $4\frac{1}{2}$ millim. (♀.)

Hab. PANAMA, Chiriqui (*Trötsch*).

This species will be readily identified from our figure; it has no near known ally, though an undescribed form from Cayenne in Mr. F. Bates's collection slightly approaches it.

b. *Anterior trochanters produced into a sharp curved tooth in the male. Elytra unicolorous.*

5. **Otocerus hamatus.** (Tab. XVI. fig. 22, ♂.)

Elongate ovate, moderately convex, dull brownish-bronze or reddish-brown. Head finely and closely punctured in front, much more coarsely so behind, feebly impressed between the eyes, the anterior half and the oral organs reddish-brown; eyes large, approximate in the male, narrowly separated in the female; antennæ slender in both sexes—in the male moderately long, joints 4–10 a little dilated at their inner apical angle, 3 very short, 4 nearly twice as long as 3, 5–7 subequal, 8–10 decreasing slightly in length and much longer than broad, 11 as long as 10 and bluntly rounded at the apex—in the female shorter, joints 4–10 not extended at their inner apical angle, 11 oblong ovate—ferruginous or fusco-ferruginous; prothorax transverse, slightly convex, the sides immarginate, angularly dilated on each side in the middle and there armed with a short tooth, and thence to the base and apex obliquely converging, a little more narrowed in front than behind, the apex nearly straight, the base feebly bisinuate, the anterior angles rather prominent, the hind angles subrectangular, the disc a little flattened, shallowly canaliculate, and broadly transversely depressed behind, the basal foveæ large but not deep, the surface rather uneven, coarsely, shallowly, and closely punctured, the punctures here and there confluent; scutellum scutiform, rather closely punctured; elytra comparatively rather short, subparallel in their basal third, coarsely crenate-striate, more finely so towards the apex, the interstices smooth and convex throughout, the surface rather more shining than that of the head and prothorax; beneath dull reddish-brown, finely, shallowly, and sparingly punctured, the sides of the metasternum and the flanks of the prothorax coarsely and shallowly so; pro- and mesosternum broad, the former depressed in the middle between the coxæ and declivous behind; legs slender, very closely and somewhat coarsely punctured, the basal half of the femora very much smoother, more or less ferruginous, the femora usually stained with piceous; the first joint of the posterior tarsi very long, about half as long again as the apical joint; the anterior trochanters produced into a fine sharp slightly curved tooth, the anterior tibiæ very slightly curved and sinuous (as in the female), and the fifth ventral segment broadly and shallowly depressed in the middle, in the male.

Length 10½–12 millim.; breadth 3⅓–4 millim. (♂ ♀.)

Hab. Nicaragua, Chontales (*Belt, Janson*).

Many specimens. *O. hamatus* is readily identified by the dull brownish-bronze surface, the elongate-ovate shape, the comparatively slender antennæ, the shape and sculpture of the thorax, the somewhat coarsely crenate-striate elytra, and the convex interstices; and also by the sharply-toothed anterior trochanters in the male.

2. *Eyes much smaller, widely separated.*

† *Elytra pointed at the apex, moderately long; upper surface bronze.*

6. **Otocerus microps.** (Tab. XVI. fig. 23.)

Moderately elongate, rather convex, greenish-bronze, shining. Head rather coarsely, closely, and irregularly punctured, the epistoma much more finely so, the latter transversely impressed in the middle behind, the vertex longitudinally grooved in the middle, the groove extending to the epistoma; eyes small, widely separated; antennæ stout, rather short, much widened outwardly, joints 4–10 flattened, 4 much longer and wider than 3, 5–10 each much shorter than 4, nearly equal in length, and about as broad as long, 11 ovate, bluntly rounded at the apex, the joints brownish-piceous, æneous towards the base; prothorax transverse, subquadrate, convex, but a little flattened on the middle of the disc, the sides almost straight behind, slightly sinuate immediately before the subacute hind angles, very gradually and obliquely converging from the middle to the apex, with a short blunt median tooth, and from the tooth to the rounded

(but rather prominent) anterior angles finely margined (the margin not visible from above), the base feebly bisinuate, the apex nearly straight, the basal foveæ narrow, the disc canaliculate and irregularly depressed on each side about the middle, the surface very irregularly, somewhat coarsely, and moderately closely punctured, more sparingly so on the disc; scutellum triangular, sparingly punctured; elytra convex, moderately long, widest at the base, the humeri rather prominent and impressed within, subparallel in their basal third, rapidly narrowing from the middle to the apex, the apices a little divergent and submucronate, rather coarsely punctate-striate, the punctures becoming finer towards the apex and oblong in shape, the interstices smooth and feebly convex throughout; beneath more shining, greenish-bronze, the ventral segments 1–4 sparingly, subequally, and somewhat finely, but deeply, punctured, the fifth segment much more coarsely so, the sides of the metasternum and the flanks of the prothorax very coarsely punctured; legs moderately long, the femora shallowly and rather finely, the tibiæ more coarsely, punctured, greenish-æneous, the tarsi dark violaceous; the first joint of the posterior tarsi long, about as long as the apical joint; the tibiæ slightly curved, the anterior pair a little sinuous.

Length 12 millim.; breadth 3½ millim.

Hab. NICARAGUA, Chontales (*Belt*).

One example, apparently a male. This species has quite a different facies from its allies; it is easily identified by the elytra being narrowed from a little below the base and submucronate at the apex, the canaliculate head and thorax, the small eyes, &c.

†† *Elytra rounded at the apex, short; upper surface violaceous.*

7. **Otocerus impressipennis.** (Tab. XVI. fig. 24, ♀.)

Oblong ovate, rather broad, moderately convex, bright violaceous. Head closely and somewhat coarsely punctured, the punctures more irregular and here and there confluent between the eyes, the latter comparatively small and widely separated in both sexes; antennæ moderately long and stout, very little shorter in the female, the third joint much shorter than the fourth, joints 4–10 angularly produced at their inner apical angle and rather broadly flattened, still broader in the female (7 and 8 the widest) and all longer than broad, the apical joint narrower and ovate, the latter more or less ferruginous, the rest violaceous or cyaneous; prothorax broad, strongly transverse, convex, the sides subangularly dilated in the middle and there armed with a short tubercle, narrowly but completely margined (the margin in part visible from above), strongly narrowed and rounded in front, and almost straight or feebly narrowed behind, the apex nearly straight, the base slightly sinuate, both very strongly margined, the anterior angles deflexed and broadly rounded, the hind angles subrectangular, the disc deeply transversely impressed before the base, and usually with a shallow irregular fovea on each side about or a little before the middle, between which and the lateral margin (in some examples) is a long transverse impression, the basal foveæ deep and oblique, the surface finely and sparingly punctured; scutellum large, triangular, finely punctured; elytra comparatively short and broad, subparallel in their basal half, thence rapidly rounded and converging to the apex, the humeri prominent and impressed within, finely punctate-striate, the striæ interrupted before the middle by a strong transverse or oblique elevation extending from the second to the sixth interstices, the elevation bifurcate laterally (with the lower ramification extending to the eighth interstice) and limited before and behind by a deep transverse or oblique impression, the interstices feebly convex about the middle and flat beyond, and finely and sparingly but quite distinctly punctured, the epipleuræ extending rather broadly to the apex; beneath bright cyaneous, almost smooth, the fifth ventral segment, the metasternum and side-pieces, and the flanks of the prothorax with scattered moderately coarse impressions; legs moderately long, sparingly punctured, violaceous, the first joint of the posterior tarsi longer than the apical joint; anterior tibiæ slightly curved in the male, the fifth ventral segment unimpressed in this sex.

Length 10–11¼ millim.; breadth 3¾–4½ millim. (♂ ♀.)

Hab. PANAMA, Bugaba 1000 feet (*Champion, Trötsch*).

Six examples. In general facies this insect departs widely from the described species of *Otocerus*; I am unable, however, to satisfactorily separate it from that genus. The unicolorous violaceous surface, serrate antennæ, widely separated eyes, broadly rounded anterior angles of the thorax, and transversely creased elytra readily distinguish *O. impressipennis* from its allies. The thorax is still more distinctly margined at the sides than in *O. nicaraguensis*: in this respect *O. impressipennis* differs from the more typical species much in the same way as does *Pœcilesthus* from *Strongylium*.

PSEUDOTOCERUS.

Near *Otocerus* and differing as follows:—Head longer and more exserted; eyes small, more or less widely separated, and distant from the prothorax; last joint of the maxillary palpi less strongly securiform; antennæ long and rather slender, a little flattened from the fourth joint, the third joint about one half or less than one half the length of the fourth, the joints 4–10 subparallel and scarcely dilated at their inner apical angle; prothorax cylindrical, immarginate at the sides, almost unimpressed; elytra more or less attenuate behind; legs very slender, the intermediate and posterior pairs exceedingly long and slender; the first joint of the posterior tarsi very long, in *P. longipes* three times, in *P. attenuatus* twice, as long as the apical joint; prosternum longitudinally and angularly raised on each side (very sharply so in *P. longipes*) between the coxæ; form elongate, cylindrical.

This new genus is proposed for the Brazilian *Stenochia longipes*, Lucas, and an undescribed form from Nicaragua. Mäklin places the former somewhat doubtfully in *Otocerus*, and at the end of that genus, and at the same time calls attention to the peculiar form of the prosternum, &c.; a second species having now been discovered the differences are such as to warrant their separation.

1. **Pseudotocerus attenuatus.** (Tab. XVI. fig. 25, ♀.)

Subcylindrical, narrow, cyaneous, with a violaceous tinge, moderately shining. Head very closely and somewhat coarsely punctured behind, irregularly so between the rather widely separated eyes, more finely punctured in front, the antennary orbits very prominent; antennæ with the third joint very short, not half the length of the fourth, the joints from the fourth long and rather broadly flattened almost from the base and very little dilated at the inner apical angle, 5–7 shorter than 4, subequal (the rest missing), violaceous; prothorax cylindrical, nearly as long as broad, gradually narrowing from the base (a little more rapidly so near the apex), the base and apex nearly straight, the latter very strongly margined, the anterior angles obtuse, the hind angles subacute, the basal foveæ very shallow, the disc obsoletely canaliculate, the surface closely and somewhat coarsely punctured, the punctures here and there confluent; scutellum subtriangular, violaceous; elytra long and attenuate, subparallel in their basal half, the apices almost pointed, rather coarsely punctate-striate, the punctures oblong in shape and coarser towards the base, and finer and shallower towards the apex, the interstices flat to beyond the middle, slightly convex behind, and closely and finely punctured; beneath rather more shining, violaceous, the ventral surface very finely and sparingly punctured, the fourth and fifth ventral segments more coarsely so, the sides and side-pieces of the metasternum and the flanks of the prothorax closely and coarsely punctured; legs coarsely and somewhat closely punctured, violaceous, the tibiæ towards the base and the tarsi reddish.

Length 11 millim.; breadth 2⅔ millim. (♀.)

Hab. NICARAGUA, Chontales (*Belt*).

One mutilated example. This species is at once separated from *P. longipes* by the more shining and unicolorous surface, more dilated antennæ, less coarsely sculptured elytra, &c.; the third joint of the antennæ is shorter than in *P. longipes*.

With *Pseudotocerus* we finish the first family, the Tenebrionidæ, of the series to be treated in this volume. During the course of publication a large amount of additional material has come to hand. The second Mexican expedition of Herr Höge, made in 1885–1887, has brought to light a number of new species, or species not hitherto known from within the limits of the Central-American fauna. The exploration of the Northern Mexican States, more especially of Chihuahua and Durango, has proved still further the identity of the Coleopterous fauna of the Southern United States and Northern Mexico,—several well-known North-American forms, including two genera not hitherto recorded from so far south, viz. *Embaphion* and *Alobates*, as well as various species of *Asida* and *Elæodes*, having been discovered by Herr Höge.

These and the numerous new species (which include some very interesting forms of Asidinæ) will be included in the Supplement.

The genus *Eusattus*, as anticipated, proves to be more numerous in species in Northern Mexico, four only being known at the time of publication.

The whole of the species of 'Helopides' and of the following groups contained in Herr Höge's collection were received in time to be inserted in their proper places.

To Mr. Flohr of Mexico, at whose instigation the second expedition of Herr Höge was made, we are also indebted for various interesting Mexican species.

From the Island of Ruatan, Honduras, a small collection of Coleoptera has been sent to us by Mr. Gaumer; and though it contains no new Tenebrionidæ, it proves the existence of various species of *Platydema* in the island.

The only other important addition to the Central-American Tenebrionidæ known to me as yet is a large maculated species of *Zophobas* (closely allied to, if not identical with, a South-American form), of which we have received a single example from Dr. Staudinger; this insect is from Chiriqui.

Fam. CISTELIDÆ.

The tropical forms of Cistelidæ have been much neglected, and the majority of the species existing in collections are still undescribed. Not a single species has been as yet described or noticed from any part of Central America*, though the family is very numerously represented in every part of the Neotropical Region. *Lobopoda* is perhaps the most characteristic genus of Cistelidæ in the New World; it contains upwards of forty species in Central America. *Hymenorus* also contains a large number of species in our region, though it is of a much more northern distribution and does not extend south of Nicaragua. The "Lystronychides," the genera of which contain the most characteristic forms of the Tropical-American Cistelidæ, are poorly represented in Central America; the species of this group are usually more brightly coloured, and in one genus (*Prostenus*) the antennæ have their outer joints greatly dilated and flattened. The group "Cteniopides," in which the sixth ventral segment is extended beyond the fifth and visible in both sexes, is not represented in Central America. The Cistelidæ are numerous in both the Old and New Worlds and a very large number inhabit Australia. Nearly the whole of the Central-American species are described as new, and many new genera have been required for them. These insects are found upon trees or herbage and also beneath the loose bark of trees; no doubt the earlier stages of many of the species are passed in decaying timber.

Excellent specific characters exist in many of the members of this family in the structure of the secondary sexual organs of the males; and in the genus *Lobopoda* these characters are of great assistance in discriminating the very numerous closely allied species. These parts being very hard and chitinous they can be extracted and examined with very little difficulty, and they are frequently extruded at the time of death. Numerous specimens of the same species have in some cases been examined and the structure proves to be invariably constant, the only variation being a little in degree. The sixth or last ventral segment, which in the Central-American Cistelidæ is usually completely hidden beneath the fifth in both sexes, is in many genera greatly modified and has on either side a long projecting lobe; these lateral lobes no doubt form clasping-organs, and they vary greatly in shape (sometimes being of a very complex character) according to the species. Above and on either side of the long chitinous central sheath containing the intromittent organ (and quite independent of the lateral lobes) a stout chitinous piece more or less rounded off at the end and concave within is visible: these pieces are connected above by membrane, and are more or less approximate when the

* The genus *Blepusa* was established by Prof. Westwood (Trans. Ent. Soc. Lond. iii. p. 69) upon a single species, *B. costata*, the exact locality for which was not certainly known; the insect was supposed to be from "Mexico or some adjacent part of South America." It cannot be regarded as belonging to the Central-American fauna.

central sheath is withdrawn and partly close the orifice; they vary very little in the species examined, and do not call for particular comment. The chitinous central sheath works freely in and out and is easily extracted entire; it varies considerably in structure in the different species, though to a less degree than the lateral lobes of the segment. These modifications of structure will be better understood from our figures; it is almost impossible to describe them satisfactorily*.

The pectinate claws easily distinguish the Cistelidæ from the preceding and following groups.

The following table, based solely upon species here enumerated, will assist in the identification of the Central-American genera:—

1.	Penultimate joint of the tarsi (and sometimes the third or more of the basal joints of the two anterior pairs in the male) more or less lobed beneath; intercoxal process of the abdomen (except in *Menes*) narrowly triangular.	
	Penultimate joint of the tarsi not lobed beneath	14.
2.	Body winged	3.
	Body subapterous	12.
	Body apterous	13.
3.	Anterior face of the prosternum more or less vertical, the head resting on this part in repose; eyes usually very large, at least in the male	*Lobopoda.*
	Anterior face of the prosternum with a gradual slope, the space in front of the anterior coxæ broader	4.
4.	Mandibles at most feebly cleft; fifth ventral segment in male normal; body not metallic.	5.
	Mandibles deeply cleft; fifth ventral segment in male abnormal; body metallic, hirsute	*Temnes.*
5.	Prothorax narrower than the elytra at the base, more or less transverse	6.
	Prothorax about as broad as the elytra at the base, twice as broad as long	10.
	Prothorax broader than the elytra at the base, the hind angles very prominent and directed backwards	11.
6.	Prothorax not constricted behind	7.
	Prothorax constricted behind and subcordate in shape	*Telesicles.*
7.	Prothorax with a deep transverse basilar groove; body glabrous . .	*Charisius.*
	Prothorax without transverse basilar groove; body pubescent . .	8.
8.	Antennæ very long and more or less filiform in both sexes	9.
	Antennæ with the basal joint of usual length, the joints each a little widened towards their apex in both sexes	*Hymenorus.*
	Antennæ with long basal joint, joints 4–6 dilated within in the male.	*Theatetes.*

* Our figures have been drawn by Mr. G. S. Saunders, to whom we are much indebted for his assistance in the examination of these complex organs.

9. Last joint of the labial palpi broad, triangular; last joint of the maxillary palpi broadly triangular; elytra moderately long . . . *Allecula.*
   Last joint of the labial palpi ovate, the apex truncate; last joint of the maxillary palpi elongate-triangular; elytra very long, parallel, and depressed . . . . . *Alethia.*
10. Mesosternum longitudinally and convexly raised, its anterior face vertical; legs and antennæ rather short; body ovate . . . . . *Polyidus.*
    Mesosternum normal; legs and antennæ short; body short ovate. . *Menes.*
11. Head visible from above; antennæ not compressed, freely articulated, sometimes with joints 3–5 dilated in the male . . . . . *Menœceus.*
    Head completely invisible from above; antennæ compressed, closely articulated, and short . . . . . *Diopœnus.*
12. Prothorax long and cylindrical; antennæ long, the joints obconic; body glabrous . . . . . *Narses.*
13. Legs and antennæ long and slender; head short, the eyes close to the anterior margin of the prothorax; body submetallic . . . . . *Pitholaus.*
    Legs and antennæ stouter; head longer, the eyes distant from the prothorax; body subopaque or dull . . . . . *Phedius.*
14. Intercoxal process of the abdomen narrowly triangular . . . . . 15.
    Intercoxal process of the abdomen broadly triangular . . . . . 16.
15. Antennæ with the third joint shorter than the fourth (often very short in the male); joints 4–10 longer and broader in the male . *Cistela.*
    Antennæ with the third and fourth joints equal; joints 4–10 scarcely differing in the male . . . . . *Isomira.*
16. Head subrostrate; antennæ (female) with the joints cylindrical . . *Erxias.*
    Head not prolonged in front. . . . . 17.
17. Femora clavate towards the apex; antennæ with the outer joints very large and broad and much flattened . . . . . *Prostenus.*
    Femora not clavate. . . . . 18.
18. Prothorax as broad as the elytra . . . . . *Cteisa.*
    Prothorax narrower than the elytra . . . . . 19.
19. Antennæ with the penultimate joints transverse or about as long as broad. . . . . *Xystropus.*
    Antennæ with the penultimate joints longer than broad, filiform or flattened . . . . . *Lystronychus.*

LOBOPODA.

Lobopoda, Solier, Ann. Soc. Ent. Fr. 1835, p. 233; Lacordaire, Gen. Col. v. p. 500 (1859).
Monoloba, Solier, loc. cit. p. 235.

This genus is peculiar to the New World and contains a very large number of species; fourteen only have been referred to it as yet, all of which are from South America. *Lobopoda* has its headquarters in the forest-region of Tropical America, the

genus ranging from the Southern United States* to the Argentine Republic. No less than forty-four species are here enumerated from Central America; twenty-five of these were captured by myself in Guatemala or the State of Panama. The equally numerous South-American forms stand greatly in need of revision, several of those described by the older authors being quite unrecognizable from the descriptions.

Important specific characters are to be found in the secondary sexual organs or œdeagus of the males, as will be seen from a reference to our figures; and also in other sexual marks of distinction mentioned in the following descriptions.

The genus might be further divided by the separation of those species which have the four basal joints of the intermediate, as well as those of the anterior, tarsi lobed beneath in the males, and also by the extraction of those having the four basal joints of the anterior tarsi in the males and the penultimate joint of the intermediate and hind tarsi in both sexes (*Monoloba*, Sol.) lobed beneath; these characters, however, are subject to variation. In some species the females have one or two joints, in addition to the penultimate one, of the anterior and intermediate tarsi lobed beneath.

L. gigantea may possibly on the discovery of the male have to be removed to another genus. *L. nitida* and the following six species form a little group known to me only as yet from Central America. In *L. tenuicornis* the anterior tibiæ in the male are simply curved, and the penultimate joint of the four anterior tarsi is very narrowly lobed beneath. Some few species, *L. acutangula*, *L. mexicana*, &c., have the elytra sharply pointed or mucronate at the apex in the female; two, *L. cariniventris* and *L. irazuensis*, have the venter longitudinally carinate in the middle in the male. The chief characters for the genus lie in the anterior face of the prosternum being more or less vertically inclined, the head resting on this part in repose; and in the large eyes, especially in the males. The base of the prothorax is more strongly bisinuate than in the Central-American species of *Allecula*.

The different species are found beneath loose bark or by beating the withered branches of fallen trees, and also upon herbage; one or two are gregarious in their habits.

Sect. I. *Anterior tarsi in the male with the four basal joints more or less lobed and produced beneath, the penultimate joint of all the tarsi strongly so in both sexes; body pubescent.* (Monoloba, *Sol.*, *Lacord.*)

1. *Prosternum horizontal, subacuminately produced, and received by the deeply excavate mesosternum.*

1. **Lobopoda gigantea.** (Tab. XVII. fig. 1, ♀.)

Elongate, broad, rather depressed, dark bronze, shining, thickly clothed with ashy pubescence. Head very irregularly, somewhat closely, and rather coarsely punctured; eyes (♀) moderately large, widely

* The North-American *Allecula punctulata* (Melsh.), *A. erythrocnemis* (Germ.), and *A. atra* (Say) belong to this genus as here understood.

separated; prothorax very broad at the base, the sides a little sinuate behind and rapidly converging from the very acute outwardly directed hind angles, the disc flattened and distinctly canaliculate, the basal foveæ large and rather deep, the surface very irregularly, rather coarsely, and somewhat closely punctured, a narrow ill-defined longitudinal space on the middle of the disc impunctate; elytra long and broad, narrowing from the base, broadly depressed below the scutellum, the base rather deeply impressed on each side within the humeri, with rows of fine closely placed punctures which gradually become finer towards the apex, the interstices here and there feebly raised in the middle, flat on the basal half of the disc, and very sparsely and very irregularly punctured, the punctures on the apical half as coarse as those of the striæ; beneath dark bronze, rather closely and somewhat coarsely punctured, a longitudinal space on the middle of the metasternum impunctate; prosternum horizontal, convexly and subacuminately produced and received by the deeply excavate mesosternum; legs and antennæ obscure dark bronze, the former very thickly pubescent.

Length 19 millim.; breadth 7 millim. (♀.)

Hab. MEXICO, Santecomapan (*Sallé*).

A single female example. This species differs from the known forms of *Lobopoda* in the shape of the prosternum; but in its other characters it approaches the first section of that genus so closely, more especially to *L. grandis*, that I am unwilling to separate it in the absence of the male sex.

2. *Prosternum abruptly declivous behind.*

* *Upper surface brownish-piceous.*

2. Lobopoda grandis.

Elongate, very broad, brownish-piceous or piceous, shining, very thickly pubescent. Head coarsely and irregularly punctured, the punctures here and there confluent on the vertex; eyes (♀) moderately large, somewhat widely separated; prothorax very broad, not very convex, sinuate at the sides behind, the hind angles directed a little outwards though somewhat obtuse, the disc subcanaliculate, broadly but shallowly impressed in front, deeply transversely impressed before the base, and with a shallow irregular impression on each side about the middle, the basal impression extending on each side to the deep foveæ, the surface coarsely, irregularly, and somewhat closely punctured; elytra broad, gradually narrowing from a little below the base, with rows of rather fine punctures placed in broad grooves, the striæ only distinct towards the apex, the interstices moderately convex, strongly so beyond the middle, and sparsely and somewhat finely punctured; beneath thickly pubescent, coarsely and rather closely punctured; mesosternum convex, its anterior face abruptly declivous and excavate towards the base only; legs thickly pubescent and closely punctured, brownish-piceous, the tarsi rather short and stout; antennæ fusco-ferruginous.

Length 17–17½ millim.; breadth 6⅓–6½ millim. (♀.)

Hab. NICARAGUA, Chontales (*Belt, Janson*).

Three female examples. This species, except as regards the structure of the prosternum, seems to be almost intermediate between *L. gigantea* and the typical forms of *Lobopoda*; both are comparatively very broad and large in size. The mesosternum in *L. grandis* is much more convex and has its anterior face more strongly declivous than in any of the other species of the genus known to me. The male remains to be discovered.

** *Upper surface dark bronze, the elytra of a lighter æneous tint.*

3. **Lobopoda asperula.** (Tab. XVII. figg. 2, 2 *a*, *b*, ♂.)

Elongate, broad, brownish-bronze, the elytra lighter in tint and with a more distinct æneous tinge and more shining, thickly clothed with ashy pubescence. Head coarsely and irregularly, but rather sparsely, punctured; eyes moderately large, rather widely separated in the male, separated by a broad space in the female; prothorax broad, narrowing from the base, the sides rather strongly sinuate behind, the hind angles subacute and extending outwards (reaching almost as far outwardly as the humeri), the disc obsoletely canaliculate (except in front), impressed in the middle before the base, and with a shallow irregular impunctate depression on each side about the middle, the basal foveæ very deep, the surface closely, coarsely, and irregularly punctured: elytra long and broad, subparallel in their basal third, gradually narrowed beyond, somewhat broadly rounded behind, comparatively deeply impressed at the base on each side within the humeri, with very finely and closely punctured striæ, the striæ very lightly impressed, the interstices each with an ill-defined, much interrupted, and rather sinuous series of feeble longitudinal elevations, almost flat on the basal half of the disc, and with a few scattered punctures, the punctures not much finer than those of the striæ; beneath sparsely and moderately coarsely punctured, the middle of the metasternum behind more closely so in the male; legs stout, fusco-ferruginous, the femora darker and æneous in tint; antennæ fusco-ferruginous.

♂. Anterior tibiæ angularly widened on the inner side before the middle. The fifth ventral segment deeply and semicircularly excavate in the middle at the apex. The lateral lobes of the last ventral segment long, strongly sinuous (though parallel if viewed from beneath), the apices produced and recurved upwards, forming a sort of hook, and almost pointed; the central sheath broad, gradually narrowing, the extreme apex recurved and somewhat hooked. (Figg. 2 *a*, 2 *b*.)

Length 12½--17 millim.; breadth 5⅓ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Yucatan (*Sallé*, *Gaumer*).

A large number of examples of both sexes. In the peculiar sculpture of the elytra this species somewhat resembles *L. gigantea*, though it is very different in shape.

Labelled *L asperula*, Deyr., in the Sallé collection, and *L. senex*, Dup., in Mr. F. Bates's collection.

Sect. II. *Anterior (and in several species the intermediate) tarsi in the male with the four basal joints more or less lobed beneath, the penultimate joint of the anterior and intermediate pairs strongly so in both sexes; prosternum abruptly declivous behind.* (Lobopoda, *Sol.*, *Lacord.*)

a. *Body pubescent.*

* *Upper surface black, piceous, or reddish-brown.*

† *Anterior and intermediate tarsi in the male with the four basal joints lobed beneath.*

4. **Lobopoda acutangula.** (Tab. XVII. figg. 3, 3 *a*.)

Elongate, moderately broad, brownish-piceous or black, shining, rather sparsely pubescent. Head with scattered moderately coarse punctures; eyes large and approximate in the male, rather smaller and moderately widely separated in the female; prothorax sparsely and somewhat coarsely punctured, the disc indistinctly canaliculate, and transversely impressed before the base, the basal foveæ deep, the sides a little sinuate before the base and somewhat rapidly converging from the more or less acute outwardly directed hind angles, the latter extending laterally as far as the humeral angles of the elytra; elytra

long, wide at the base, rather rapidly narrowing from a little below the shoulders, somewhat deeply striate, the striæ very closely punctate, the interstices feebly convex on the basal half of the disc, strongly so at the sides and beyond the middle, and with scattered rather coarse punctures, the apices slightly produced and more or less sharply pointed in the female; beneath very sparsely punctured; legs and antennæ more or less ferruginous, the femora usually darker.

♂. Anterior tibiæ slightly sinuous within. The fifth ventral segment broadly and semicircularly excavate in the middle behind, the excavation extending to the apical margin. The lateral lobes of the last ventral segment long and curved, slightly setose within, very broad towards the base, narrowing outwardly, and hooked upwards at the apex; the central sheath rather abruptly narrowed and acuminate at the apex, the apical portion short, feebly setose beneath, and slightly recurved, the extreme apex somewhat hooked. (Figg. 3, 3 *a*.)

Length $12\frac{1}{2}$–$13\frac{1}{2}$ millim.; breadth $3\frac{3}{4}$–$4\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*), Orizaba (*Sallé*); British Honduras (*Blancaneaux*); Guatemala, El Reposo, Zapote, Tamahu, Purula (*Champion*); Nicaragua, Chontales (*Belt*); Panama, Volcan de Chiriqui (*Champion*).

Numerous examples. This species is chiefly distinguished amongst its allies by the sharp and laterally extended hind angles of the thorax; and by the interstices of the elytra being strongly convex at the sides and apex, and only feebly so on the anterior half of the disc. The very deep semicircular excavation at the apex of the fifth ventral segment is a marked male character, as also is the structure of the œdeagus. In some examples the hind angles of the thorax are less acute than in others; the apices of the elytra in the female are always more or less produced and pointed.

5. **Lobopoda tristis.** (Tab. XVII. figg. 4, 4 *a*.)

Moderately elongate, rather broad, brownish-piceous or black, shining, sparsely pubescent. Head with scattered, rather coarse punctures; eyes very large and approximate in the male, smaller and moderately widely separated in the female; prothorax sparsely, but somewhat coarsely, punctured, the disc very shallowly canaliculate, and shallowly transversely impressed before the base, the basal foveæ deep, the sides slightly sinuate behind, the hind angles somewhat acute; elytra moderately long, a little rounded at the sides, and gradually narrowing from a little below the base, moderately deeply striate, the striæ closely punctured, the interstices slightly convex, and with scattered rather coarse punctures, the apices feebly mucronate in the female; beneath sparingly, but somewhat coarsely, punctured, the metasternum rather more closely so in the male; antennæ ferruginous; legs brownish-piceous, the tarsi more or less ferruginous.

♂. Anterior tibiæ widened on the inner side from near the base, and thence to the apex a little sinuous within. The lateral lobes of the last ventral segment long and twisted, obliquely truncate at the apex, widened and subangularly raised on each side inwardly and outwardly (between which is a deep groove) towards the base, the inner edges finely serrate within; the central sheath very broad, the apical portion narrower, setose beneath, spoon-shaped, and recurved, the sheath itself armed just behind the spoon-shaped piece with two transversely placed rounded prominences above. (Figg. 4, 4 *a*.)

Length $11\frac{2}{3}$–13 millim.; breadth $4\frac{1}{2}$ millim. (♂ ♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Numerous examples. Shorter, smaller, and with the elytra rather more parallel and the striæ shallower than in *L. panamensis*; the hind angles of the thorax more acute, &c. The narrower form, more shallowly impressed thorax, and feebly mucronate apices of the elytra (in the female) separate *L. tristis* from *L. mucronata*. The complicated structure of the œdeagus of the male will be best understood from our figure.

6. **Lobopoda mexicana.** (Tab. XVII. figg. 5, 5 *a*, ♂.)

Moderately elongate, black or brownish-piceous, rather dull, somewhat thickly pubescent. Head with scattered rather coarse punctures; eyes large and approximate in the male, considerably smaller and comparatively widely separated in the female; prothorax sparsely and somewhat finely punctured, the disc obsoletely canaliculate, and very shallowly transversely impressed before the base, the basal foveæ shallow, the hind angles more or less rectangular; elytra moderately long, narrowing very gradually from a little below the base, comparatively broad behind, the apices feebly (in some examples very distinctly) mucronate in the female and somewhat broadly rounded in the male, with moderately deep and closely punctured striæ, the interstices very feebly convex, a little more strongly so at the apex, and moderately coarsely and somewhat closely punctured; beneath sparsely and moderately coarsely punctured, the metasternum in the middle behind closely so in the male; legs piceous or dark ferruginous, the tarsi lighter; antennæ ferruginous.

♂. Anterior tibiæ on the inner side widened from near the base and thence to the apex sinuous. The lateral lobes of the last ventral segment long and twisted, somewhat spoon-shaped and curved towards the apex, widened and subangularly raised on each side inwardly and outwardly (between which is a deep groove) towards the base, the inner edges very finely serrate within; the central sheath very broad, the apical portion setose beneath, spoon-shaped, and recurved, the sheath itself armed just behind the spoon-shaped piece with two transversely placed rounded prominences above. (Fig. 5 *a*.)

Length 11–13½ millim.; breadth 4–4⅔ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Presidio (*Forrer*), Santecomapan, Tuxtla, Cordova (*Sallé*), Jalapa, Frontera in Tabasco (*Höge*), Temax in N. Yucatan (*Gaumer*); British Honduras, Belize (*Blancaneaux*); Guatemala, San Gerónimo, Zapote (*Champion*).

Found in great abundance in Yucatan, and also at Jalapa and elsewhere in Mexico, but becoming much rarer southwards. This insect resembles *L. tristis*, but is smaller, and also differs as follows:—The thorax is more finely punctured, and the hind angles are rectangular and less acute; the elytral interstices are flatter and more finely punctured; the metasternum is more closely punctured in the male, and the upper surface is less shining and more thickly pubescent. The œdeagus of the male is very similar in structure; the lateral lobes of the last ventral segment are, however, more rounded (and less truncate) at the apex, and more curved.

In some female examples the apices of the elytra are sharply mucronate, in others only feebly so.

Labelled *L. sparsepunctata*, Deyr., in the Sallé collection.

The North-American *Allecula punctulata* (Melsh.) is an ally of *L. mexicana*; it is known from as far south as Laredo in Texas, just beyond our northern boundary.

†† *Anterior tarsi in the male with the basal four joints lobed beneath.*

7. **Lobopoda panamensis.** (Tab. XVII. figg. 6, 6 *a*, ♂.)

Elongate, rather broad, piceous-black, the elytra dark castaneous, shining, very sparsely pubescent. Head with scattered, rather coarse, punctures; eyes very large and approximate in the male, smaller and moderately widely separated in the female; prothorax sparsely but comparatively coarsely punctured, the disc very shallowly canaliculate, with a rounded impression on each side about the middle, and broadly transversely impressed before the base, the basal impression connecting the rather deep foveæ, the hind angles subrectangular; elytra long, broad towards the base, somewhat rapidly narrowing from a little below the shoulders, deeply striate, the striæ closely punctate, the interstices convex, and with a row of

not very closely placed punctures on each side, the apices in the female slightly thickened and divergent; beneath piceous, almost glabrous, sparingly but somewhat coarsely punctured, the metasternum more closely so in the middle in the male, the fifth ventral segment broadly impressed in the centre in both sexes; legs and antennæ dark castaneous.

♂. Anterior tibiæ broadly and subangularly dilated on the inner side a little beyond the middle, the dilated part concave within; anterior femora with a short tooth a little before the middle. The lateral lobes of the last ventral segment somewhat spoon-shaped, very long, and inwardly curved, the upper edges very finely serrate and the lower edges clothed with long fine hairs within; the central sheath broad, narrowing to the apex. (Fig. 6 *a*.)

Length 15–16 millim.; breadth 5–5½ millim. (♂ ♀.)

Hab. PANAMA, Caldera in Chiriqui 1200 feet (*Champion*).

Two examples. This species is distinguished by its large size and deeply impressed thorax, and by the elytra being comparatively broad towards the base.

8. **Lobopoda mucronata.** (Tab. XVII. fig. 7, ♀.)

Moderately elongate, broad, piceous-black, shining, sparsely pubescent. Head with scattered, rather coarse, punctures; eyes (♀) comparatively rather large, somewhat narrowly separated; prothorax broad, coarsely and moderately closely punctured, the disc canaliculate, with a rounded impression on each side about the middle, and broadly transversely impressed before the base, the basal impression deep and connecting the foveæ, the hind angles a little prominent and directed outwards though somewhat obtuse; elytra moderately long, broad, deeply striate, the striæ closely punctate, the interstices convex, and with a row of distantly placed punctures on each side, the apices produced into a rather long mucro in the female: beneath more shining, sparingly but rather coarsely punctured, the fifth ventral segment broadly impressed in the middle; legs and antennæ ferruginous.

Length 14½ millim.; breadth 5⅓ millim. (♀.)

Hab. PANAMA, Bugaba (*Champion*).

One example. Closely allied to *L. panamensis*, and differing as follows:—The eyes (in the female) are more narrowly separated; the thorax is more closely punctured, and has the impressions rather deeper; and the elytra are sharply mucronate at the apex. *L. mucronata* is perhaps a variety of *L. panamensis*, but in the absence of the male it is impossible to say for certain; the strongly mucronate apices of the elytra may prove to be a variable character, as it is in *L. mexicana*.

9. **Lobopoda apicalis.** (Tab. XVII. figg. 8, 8 *a*.)

Elongate, brownish-piceous or black, shining, rather thickly pubescent. Head sparingly but rather coarsely punctured; eyes very large and approximate in the male, rather smaller and very narrowly separated in the female; prothorax rather finely and very sparsely punctured, widest at the base, the disc shallowly canaliculate, and broadly transversely impressed before the base, the basal foveæ deep, the sides a little sinuate behind, the hind angles rectangular or subacute; elytra long, somewhat deeply striate, the striæ with rather coarse impressions throughout, the impressions closely placed and rounded in shape from the base to the middle and thence to the apex elongate and more scattered, the interstices rather convex and sparingly punctured, the apices slightly pointed in the female; beneath sparingly and somewhat coarsely punctured, the fifth ventral segment impressed in the middle in both sexes; legs dark reddish-brown or piceous, the tibiæ and tarsi more or less ferruginous; antennæ ferruginous, the three basal joints darker.

♂, major. Anterior tibiæ strongly triangularly widened on the inner side a little beyond the middle; anterior femora armed with a short tooth. The lateral lobes of the last ventral segment broad and short, somewhat extended laterally, and each armed at the apex with two short curved processes, the outer one of

which is obliquely truncate and furnished with numerous long hairs; the central sheath rather broad, gradually narrowing, its apical portion horizontal, long, and armed with very short setæ at the sides and beneath. (Figg. 8, 8 *a*.)

♂, minor. Anterior tibiæ merely sinuous within; anterior femora unarmed.

Length 12½–15 millim.; breadth 4⅓–5 millim. (♂ ♀.)

Hab. GUATEMALA, Capetillo (*Champion*).

Four examples, three males and one female. This species resembles *L. tristis* &c., but is easily separated by the punctures of the striæ being elongate in shape on the apical half of the elytra. The œdeagus in its complicated structure closely resembles that of *L. seriata*.

10. **Lobopoda atrata.** (Tab. XVII. figg. 9, 9 *a*.)

Elongate, piceous-black, slightly shining, thickly pubescent. Head with scattered shallow punctures; eyes large and approximate in the male, rather narrowly separated in the female; prothorax closely, subequally, and somewhat coarsely punctured, the disc shallowly canaliculate, and shallowly transversely impressed before the base, the basal foveæ rather deep, the hind angles subrectangular; elytra rather broad towards the base, rapidly narrowing from a little below the shoulders, with moderately deep and closely punctured striæ, the interstices slightly convex and somewhat closely punctured; beneath sparsely and rather coarsely punctured, the metasternum in the middle behind closely so in the male; legs piceous, the tibiæ and tarsi more or less ferruginous; antennæ ferruginous.

♂. Anterior tibiæ subangularly widened on the inner side towards the base. The lateral lobes of the last ventral segment long, broad, twisted and spoon-shaped beyond the middle, and abruptly narrowed and incurved at the apex; the central sheath narrow, the apical portion elongate-triangular, and slightly setose at the sides and beneath. (Figg. 9, 9 *a*.)

Length 12¼–13 millim.; breadth 4–4¾ millim. (♂ ♀.)

Hab. NICARAGUA, Chontales (*Janson, in coll. F. Bates*); PANAMA, Volcan de Chiriqui (*Champion*).

Two examples. The comparatively close punctuation and the less acute hind angles of the thorax, the less convex interstices at the apex of the elytra, the non-excavate fifth ventral segment in the male, and the differently shaped œdeagus easily distinguish this species from *L. acutangula*, which it otherwise somewhat closely resembles.

The single example (female) from Nicaragua has the thorax more finely punctured than in the male individual from the State of Panama.

11. **Lobopoda subparallela.** (Tab. XVII. fig. 10.)

Elongate, black, rather dull, somewhat thickly pubescent. Head with the vertex very closely (almost rugulosely), the epistoma rather sparsely, punctured; eyes moderately large, separated by a narrow space in the male; prothorax convex in front, the sides straight behind, the hind angles more or less rectangular, the disc slightly impressed before the base, the basal foveæ shallow, the surface coarsely and closely punctured; elytra long, subparallel in their basal half, with shallow, closely punctured striæ, the interstices feebly convex, almost flat on the basal half of the disc, and coarsely punctured; beneath coarsely and sparsely punctured, the metasternum in the middle behind closely so in the male; legs and antennæ brownish-piceous, the tarsi more or less ferruginous.

♂. Anterior tibiæ sinuous within. The lateral lobes of the last ventral segment moderately long, inwardly curved, concave, and sparsely and finely setose within, and broadly rounded at the apex; the central

sheath almost parallel, very slightly narrowed immediately before the apex, the apical portion finely setose beneath and a little recurved, the apex itself subtriangular. (Fig. 10.)

Length $12\frac{1}{2}$–$14\frac{1}{2}$ millim.; breadth 4–5 millim. (♂.)

Hab. Mexico, Yolos (*Sallé*), Jalapa, Cuernavaca, Tehuantepec (*Höge*).

Four examples, all males, one from each locality. The very closely and coarsely punctured vertex, the closely and coarsely punctured thorax, the sides of which are straight behind, and the long and subparallel elytra sufficiently distinguish *L. subparallela* from the allied forms. The four examples differ a little *inter se*; in one specimen the eyes are more widely separated, and the interstices of the elytra are rather more closely punctured, but I have no doubt that such variation is due to local causes. *L. subparallela* is of about the size and shape of *L. pallicornis* (Fabr.), from Buenos Ayres, but has the upper surface much more coarsely punctured.

12. **Lobopoda seriata.** (Tab. XVII. figg. 11, 11 *a*.)

Elongate, black, slightly shining, sparsely pubescent. Head very sparsely punctured; eyes very large and approximate in the male, much smaller and rather widely separated in the female; prothorax transversely convex, the sides from the middle to the base straight or a little rounded and narrowed, the disc canaliculate, and sometimes with a very shallow fovea on each side about the middle, the basal foveæ deep and connected by a transverse depression, the hind angles obtuse, the surface with widely scattered moderately fine punctures; elytra long, narrowing from a little below the base, with rows of coarse punctures placed upon rather shallow striæ, the punctures towards the apex much more scattered and elongate in shape, the interstices very feebly convex or almost flat and very sparsely punctured; beneath very sparsely and rather coarsely punctured, the metasternum in both sexes with widely scattered punctures; legs brownish-piceous, the tarsi and antennæ more or less ferruginous.

♂. Anterior tibiæ triangularly widened on the inner side before the middle; anterior femora with a short median tooth. The lateral lobes of the last ventral segment broad, trifurcate, the central lobe oblique, and with its apex truncate and furnished with a long fringe of hairs, the inner lobe narrow and slightly recurved and rounded at the apex; the central sheath broad, rounded at the apex. (Figg. 11, 11 *a*.)

Length $10\frac{1}{4}$–$13\frac{1}{2}$ millim.; breadth $3\frac{1}{2}$–$4\frac{2}{3}$ millim. (♂ ♀.)

Hab. Mexico, Temax in N. Yucatan (*Gaumer*).

We have quite recently received a large number of examples of this species from Mr. Gaumer.

L. seriata closely resembles *L. apicalis* in the structure of the lateral lobes of the last ventral segment in the male (differing only in the more angular lateral extension) and in the elytral sculpture; it differs greatly, however, in the shape of the thorax, and in this respect more nearly resembles *L. convexicollis* and *L. oblonga*.

Well-developed males have the anterior tibiæ more strongly triangularly widened within.

13. **Lobopoda convexicollis.** (Tab. XVII. fig. 12.)

Moderately elongate, brownish-piceous, shining, somewhat thickly pubescent. Head with the vertex very closely, the epistoma rather sparsely, punctured; eyes only moderately large and somewhat widely separated in the male, more distant in the female; prothorax rather broad and convex in front, the sides almost straight from the middle to the base, the hind angles subrectangular, the disc obsoletely

canaliculate, and a little flattened before the base, the basal foveæ moderately deep, the surface rather coarsely and somewhat closely punctured; elytra moderately long, very gradually narrowed from the base and rather broad behind, with closely punctured rather shallow striæ, the interstices feebly convex, almost flat on the basal half of the disc, and moderately coarsely punctured; beneath coarsely but sparsely punctured, the metasternum in the middle closely so in the male; legs and antennæ brownish-ferruginous.

♂. Anterior tibiæ on the inner side angularly widened before the middle, and thence to the apex sinuous. The lateral lobes of the last ventral segment rather long and stout, inwardly curved, and a little thickened at the apex, the apex bluntly rounded off; the central sheath gradually narrowed behind, the apical portion setose beneath, the apex rounded. (Fig. 12.)

Length $11\frac{1}{3}$–$11\frac{2}{3}$ millim.; breadth 4–$4\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Las Mercedes (*Champion*).

Three examples. In the comparatively narrowly separated and rather small eyes in the male, the very closely punctured vertex, and the somewhat parallel shape, this species approaches *L. subparallela*; but it is easily separated by its smaller size, shorter elytra with more finely punctured interstices, more finely punctured thorax, and more shining surface, the thorax being also broader and more convex in front.

14. **Lobopoda oblonga.** (Tab. XVII. fig. 13.)

Rather short, brownish-black, shining, sparsely pubescent. Head with the vertex closely, the epistoma sparsely, punctured; eyes (♂) comparatively small, somewhat widely separated in both sexes; prothorax strongly transverse, transversely convex, widest at the middle, the sides somewhat rounded and usually narrowing a little behind, the hind angles rather obtuse, the disc obsoletely canaliculate, the basal foveæ shallow, the surface rather coarsely and somewhat closely punctured on the disc and sparsely so towards the sides; elytra subparallel in their basal third, gradually narrowing beyond, with moderately deep striæ, the striæ from the base to the middle closely punctured, the punctures becoming obsolete towards the apex, the interstices flat on the disc, feebly convex behind, and each with an irregular row of scattered punctures; beneath sparsely and rather coarsely punctured, the middle of the metasternum more closely so in the male; legs rather stout, brownish-piceous, the tarsi and the tibiæ in part more or less ferruginous; antennæ fusco-ferruginous.

♂. Anterior tibiæ subtriangularly widened on the inner side before the middle. The lateral lobes of the last ventral segment rather long, inwardly curved, and a little thickened at the apex, the apex bluntly rounded off; the central sheath gradually narrowed to the apex, the apex rounded. (Fig. 13.)

Length $7\frac{1}{2}$–10 millim.; breadth $2\frac{3}{4}$–$3\frac{3}{4}$ millim. (♂ ♀.)

Hab. Mexico, Yucatan (*coll. F. Bates, Gaumer*).

About fifty examples. This species differs from its allies (except *L. seriata*) in the thorax being widest at the middle (consequently a little narrowed posteriorly) and rounded at the sides. The eyes are rather small and comparatively widely separated in the male; and the elytra are subparallel towards the base. *L. oblonga* resembles *L. convexicollis*, but is smaller, less elongate, and has the hind angles of the thorax more obtuse, and the interstices of the elytra more thickly and less finely punctured; the œdeagus is very similar to that of *L. convexicollis*.

15. **Lobopoda puncticollis.** (Tab. XVII. figg. 14, 14 *a*, *b*, ♂.)

Moderately elongate, dark reddish-brown or brownish-piceous, not very shining, thickly pubescent. Head rather coarsely and somewhat closely punctured; eyes (♂) very large and approximate; prothorax

comparatively wide in front, the sides slightly sinuate behind, the hind angles rectangular, the disc very shallowly canaliculate behind, the basal foveæ quite shallow, the surface very closely, subequally, and somewhat coarsely (though shallowly) punctured; elytra long, gradually narrowing almost from the base, with closely punctured striæ, the interstices feebly convex and rather finely and somewhat closely punctured; beneath rather sparsely punctured; legs and antennæ ferruginous, the femora darker.

♂. Anterior tibiæ simple. The lateral lobes of the last ventral segment short and stout, broad at the base, and each with a subangular laterally projecting piece above near the end, the apex blunt, the inner edge closely and finely serrate; the central sheath gradually narrowing to the apex, the apical portion elongate, horizontal, and finely setose at the sides, the apex blunt. (Figg. 14 *a*, *b*.)

Length 10½–11½ millim.; breadth 3–3½ millim. (♂.)

Hab. Guatemala, Capetillo (*Champion*).

Two male examples. This species is readily separated from most of its allies by the very closely punctured thorax.

16. **Lobopoda yucatanica.** (Tab. XVII. figg. 15, 15 *a*.)

Moderately elongate, dull brownish-piceous, thickly pubescent. Head closely and somewhat coarsely punctured: eyes (♂) very large and approximate; prothorax wide in front, the sides straight behind, the hind angles rectangular, the disc almost unimpressed, the basal foveæ very shallow, the surface finely and densely punctured; elytra moderately long, gradually narrowing from a little below the base, with finely and closely punctured striæ, the interstices feebly convex and finely and thickly punctured; beneath somewhat closely and rather coarsely punctured, the metasternum (♂) densely so in the middle behind; legs and antennæ brownish-ferruginous, the former short.

♂. Anterior tibiæ subtriangularly widened on the inner side before the middle. The lateral lobes of the last ventral segment short, and with a slender club-like prolongation at the end; the central sheath gradually narrowing to the apex, the latter blunt. (Figg. 15, 15 *a*.)

Length 8½ millim.; breadth 3 millim. (♂.)

Hab. Mexico, Temax in N. Yucatan (*Gaumer*).

One male example. This species is allied to *L. puncticollis*; but differs in its duller surface, more densely punctured thorax, shorter legs, more closely punctured under surface, and male characters.

17. **Lobopoda attenuata.** (Tab. XVII. fig. 16.)

Moderately elongate, dark brownish-piceous or black, shining, thickly pubescent. Head with scattered rather coarse punctures; eyes large and approximate in the male, moderately widely separated in the female; prothorax rather closely but somewhat coarsely (though shallowly) punctured, the disc obsoletely canaliculate, and shallowly transversely impressed before the base, the basal foveæ rather shallow, the hind angles rectangular; elytra rapidly narrowing from a little below the base, with rather deep and closely punctured striæ, the interstices feebly convex, a little more strongly so at the apex, and somewhat coarsely punctured, the apices rounded in both sexes; beneath sparingly but somewhat coarsely punctured; legs and antennæ more or less ferruginous, the femora darker.

♂. Anterior tibiæ triangularly widened on the inner side before the middle. The lateral lobes of the last ventral segment long, inwardly curved, and somewhat spoon-shaped, a little dilated on the upper side at the apex; the central sheath narrow, gradually narrowing behind, the apex slightly dilated. Fig. 16.)

Length 8½–10 millim.; breadth 3–3½ millim. (♂ ♀.)

Hab. Guatemala, Capetillo (*Champion*); Nicaragua, Chontales (*Belt*).

Three males from Guatemala, and a pair from Nicaragua. The latter differ from the others in being rather less elongate in shape; but as the œdeagus of the male agrees precisely in structure with that of the Guatemalan insect, I have no doubt of its specific identity.

L. attenuata resembles *L. acutangula* and *L. atrata* in shape; it is, however, more nearly allied to the latter, from which its narrower shape and much smaller size, and the differently-shaped œdeagus of the male, distinguish it.

18. **Lobopoda tropicalis.** (Tab. XVII. fig. 17.)

Moderately elongate, brownish-piceous, rather shining, somewhat thickly pubescent. Head with scattered coarsish punctures; eyes large and approximate in the male; prothorax sparsely and rather coarsely (but shallowly) punctured, the disc very distinctly canaliculate, and shallowly transversely impressed before the base, the basal foveæ not very deep, the hind angles rectangular; elytra moderately long, with closely punctured striæ, the interstices feebly convex and somewhat coarsely punctured; beneath sparsely and rather coarsely punctured, the metasternum in the middle behind closely so in the male; legs and antennæ dark ferruginous, the former thickly clothed (especially on the inner side of the femora and tibiæ) with hairs.

♂. Anterior tibiæ simple. The lateral lobes of the last ventral segment long and curved, the apical portion widened and of a flattened spatulate shape, nearly straight, and clothed with very long hairs, the inner edge minutely serrate; the central sheath rather broad, gradually narrowing behind, the apex abruptly truncate. (Fig. 17.)

Length $10\frac{1}{2}$ millim.; breadth $3\frac{2}{3}$ millim. (♂.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

A single male example. This species is of about the size and shape of *L. attenuata*; but it is readily distinguished by the more sparsely punctured and more distinctly canaliculate thorax, the simple anterior tibiæ in the male, &c. The legs are clothed with more numerous and longer and more bristly hairs than in the allied forms. In the structure of the œdeagus *L. tropicalis* departs widely from any other species here enumerated.

19. **Lobopoda femoralis.** (Tab. XVII. figg. 18, 18 *a*, ♂.)

Rather short, varying in colour from fusco-ferruginous to brownish-piceous, dull, thickly pubescent. Head rather sparsely but somewhat coarsely punctured; eyes large and subapproximate in the male, much smaller and widely separated in the female; prothorax somewhat thickly and rather coarsely (though shallowly) punctured, the disc very distinctly canaliculate, and slightly impressed before the base, the basal foveæ rather shallow, the hind angles rectangular; elytra rather short, comparatively wide towards the base and somewhat rapidly narrowed behind, with very closely punctured striæ, the interstices feebly convex and moderately coarsely punctured; beneath sparsely and rather finely punctured, the metasternum in the middle very closely so in the male; legs testaceous or fusco-testaceous, with the inner apical third of the femora piceous or black, rarely brownish-piceous with the tibiæ and tarsi more or less ferruginous; antennæ slender, testaceous or ferruginous.

♂. Anterior tibiæ more or less angularly widened on the inner side just before the middle, and between this and the apex emarginate. The lateral lobes of the last ventral segment very long, curved and angularly extended on the outer side towards the apex, and then again abruptly curved inwards, the apical portion broadly triangular, and with its apex parallel with the lobe; the central sheath very broad, somewhat

spoon-shaped, though abruptly narrowing and slightly acuminate behind, the apex a little widened and bluntly rounded. (Fig. 18 *a*.)

Length $8\frac{1}{2}$–$9\frac{1}{2}$ millim.; breadth $3\frac{1}{3}$–4 millim. (♂ ♀.)

Hab. MEXICO, Tapachula in Chiapas, Frontera in Tabasco (*Höge*); GUATEMALA, San Isidro, Volcan de Atitlan (*Champion*); PANAMA, Bugaba, Caldera in Chiriqui (*Champion*).

Many examples. This species may be known by its dull surface, very slender antennæ in the male, distinctly canaliculate thorax, comparatively short broad form, dark knees, and the very peculiar structure of the œdeagus. In two examples the femora and the greater part of the tibiæ are dark in colour.

20. **Lobopoda chontalensis.**

Moderately elongate, rather broad, piceous-black, slightly shining, thickly pubescent. Head with scattered shallow punctures; eyes (♀) moderately large and rather narrowly separated; prothorax closely and rather coarsely punctured, the sides slightly sinuate behind, the hind angles subrectangular, the disc shallowly impressed before the base and obsoletely canaliculate, the basal foveæ rather shallow; elytra broad in front, rapidly narrowing behind, rather deeply striate, the striæ to beyond the middle with very coarse punctures and thence to the apex with finer impressions, the interstices slightly convex and rather coarsely punctured; beneath sparsely but rather coarsely punctured; legs fusco-ferruginous, the tarsi lighter; antennæ ferruginous.

Length 10–$11\frac{1}{3}$ millim.; breadth $3\frac{2}{3}$–4 millim. (♀.)

Hab. NICARAGUA, Chontales (*Belt*).

Two female examples. This insect resembles the dark-legged form of *L. femoralis*; it differs in being larger and broader, and in having the elytral striæ very much more coarsely punctured and the antennæ stouter.

21. **Lobopoda simplex.** (Tab. XVII. fig. 22.)

Rather short, reddish-brown or brownish-piceous, shining, thickly pubescent. Head with scattered, shallow, rather coarse punctures; eyes large and approximate in the male, smaller and somewhat widely separated in the female; prothorax broad, convex, the disc a little flattened before the base, the basal foveæ small and shallow, the surface very shining and rather closely and somewhat coarsely punctured; elytra rather short, a little rounded at the sides, with closely and rather coarsely punctured striæ, the interstices feebly convex and finely punctured; beneath sparsely but rather coarsely punctured; legs and antennæ ferruginous.

♂. Anterior tibiæ sinuous on the inner side. The lateral lobes of the last ventral segment long and slender, very narrow, slightly curved inwards, and a little thickened at the apex; the central sheath narrow, gradually narrowing behind, the apex bluntly rounded. (Fig. 22.)

Length 9 millim.; breadth $3\frac{1}{2}$ millim. (♂ ♀.)

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*).

Three examples. The short form, the convex, non-canaliculate, and very shining thorax, and the simple structure of the œdeagus distinguish this species from others of the genus; *L. simplex* is perhaps nearest allied to *L. tropicalis*. A single female example from Yucatan (*Gaumer*) is perhaps referable to this species; it differs from the others in having the thorax more sparsely punctured and distinctly canaliculate, and in the elytra being less convex.

22. **Lobopoda opaca.** (Tab. XVII. figg. 23, 23 *a*, ♂.)

Moderately elongate, broad, dull black, thickly clothed with cinereous pubescence. Head coarsely and irregularly punctured; eyes moderately large, separated by a narrow space in the male; prothorax widest at the base, slightly sinuate at the sides behind, somewhat coarsely, irregularly, and rather closely punctured, the disc obsoletely canaliculate, and broadly longitudinally impressed before the base, the basal foveæ deep; elytra broad towards the base, gradually narrowing behind, with rows of rather coarse, oblong, not very closely placed impressions, the interstices flat throughout and finely punctured; beneath sparsely and somewhat coarsely punctured, the middle of the metasternum behind more closely so in the male; legs piceous, the tarsi fusco-ferruginous; antennæ fusco-ferruginous.

♂. Anterior tibiæ slightly widened on the inner side before the middle. The lateral lobes of the last ventral segment short and broad, curved, and spoon-shaped, the lower edge clothed with short hairs; the central sheath acuminate, the apical portion horizontal, and setose beneath, the apex slightly thickened. (Fig. 23 *a*.)

Length 11⅓ millim.; breadth 4¼ millim. (♂.)

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

One male example. This species possesses a different facies from any other of the genus here enumerated, except the following, from which it is at once separated by the diverse sculpture of the elytra. The elytra have merely rows of oblong punctures placed upon almost obsolete striæ, and the interstices are flat throughout.

23. **Lobopoda opacicollis.**

Moderately elongate, rather broad, dull brownish-black, the elytra slightly shining, thickly clothed with greyish-fulvous pubescence. Head somewhat coarsely and closely punctured, the punctures shallow; eyes (♀) moderately large and rather widely separated; prothorax with the sides slightly sinuate or almost straight behind, the hind angles varying in shape from obtusely rectangular to subacute, the disc broadly longitudinally impressed in the middle behind and obsoletely canaliculate, the basal foveæ deep, the surface opaque, very irregularly, somewhat coarsely (but shallowly), and rather closely punctured; elytra more shining than the prothorax, moderately broad, narrowing very little in their basal half, with finely and closely punctured, narrow, rather deeply impressed striæ, the interstices feebly convex and finely punctured; beneath sparsely and finely punctured; legs and antennæ fusco-ferruginous, the femora and tibiæ often darker.

Length 10–11⅓ millim.; breadth 3⅔–4 millim. (♀.)

Hab. MEXICO, Cordova, Guanajuato (*Sallé*), Jalapa (*Höge*); BRITISH HONDURAS (*Blancaneaux*).

Six examples, all females. This species can only be satisfactorily compared with the preceding; it has, however, very differently sculptured elytra. Labelled *L. sulcatipennis*, Dugès, in the Sallé collection—a very inapplicable name, and one that I cannot adopt.

24. **Lobopoda hirta.**

Elongate, rather convex, brownish-castaneous, rather dull, thickly pubescent. Head with the vertex very closely, the epistoma more sparingly and more coarsely, punctured; eyes moderately large, separated by a narrow space in the male; prothorax convex, broadly and shallowly canaliculate (except in front), deeply impressed in the middle before the base, the basal foveæ very deep, the surface very closely and shallowly but somewhat coarsely punctured; elytra subparallel anteriorly, gradually narrowing from a little before the middle, with rows of not very closely placed, oblong, moderately coarse impressions, the

interstices quite flat throughout, and sparsely and finely punctured; beneath sparsely and rather coarsely punctured, the middle of the metasternum more closely and finely so in the male; legs and antennæ reddish-ferruginous, the latter comparatively stout.

♂. Anterior tibiæ subtriangularly widened on the inner side before the middle. The lateral lobes of the last ventral segment short and broad, curved, and spoon-shaped; the central sheath acuminate, the apical portion horizontal, and setose beneath, the apex slightly thickened. (Tab. XVII. fig. 19.)

Length 11⅓ millim.; breadth 3¾ millim. (♂.)

Hab. NICARAGUA, Chontales (*Janson*).

A single male example. In the sculpture of the elytra this species resembles *L. opaca*; it differs, however, from that insect in its more convex and more closely punctured thorax, narrower and more parallel shape, and stouter legs. The œdeagus is formed almost exactly as in *L. opaca*.

25. **Lobopoda sculpturata.** (Tab. XVII. fig. 20, ♂.)

Moderately elongate, subfusiform, slightly shining, thickly pubescent, brownish-piceous, the elytra in greater part reddish-brown, the base and suture narrowly, and the lateral margins more broadly (especially behind), for three-fourths of their length, remaining of the ground-colour. Head sparsely punctured: eyes large and approximate in the male, smaller and narrowly separated in the female; prothorax convex, as wide at the base as the elytra, the sides a little sinuate behind, the hind angles subacute, the disc obsoletely canaliculate, and slightly impressed in the middle before the base, the basal foveæ shallow, the surface thickly covered with coarse, raised, irregular points, immediately behind each of which is placed a shallow setiferous puncture; elytra gradually narrowing from the base, the sides forming almost a continuous outline with the prothorax (not abruptly narrowed as usual at the shoulders), deeply striate, the striæ with moderately coarse punctures, the interstices feebly convex on the basal half of the disc, strongly so at the sides and apex, and with a few widely scattered impressions; beneath sparsely and finely punctured, the middle of the metasternum closely so in the male; legs and antennæ ferruginous, the femora darker.

♂. Anterior tibiæ angularly widened on the inner side before the middle.

Length 6–6½ millim.; breadth 2¼–2⅓ millim. (♂ ♀.)

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Three examples. The very peculiar sculpture of the thorax and the reddish-brown disc of each elytron are characters by which this small species may be easily identified. The unique male is rather immature, and I am not able to examine its œdeagus.

26. **Lobopoda lævicollis.** (Tab. XVII. figg. 21, 21 *a*, *b*, ♂.)

Moderately elongate, fusiform, dark reddish-brown, brownish-piceous, or black, shining, thickly pubescent. Head with rather coarse scattered punctures; eyes large and approximate in the male, more distant in the female; prothorax convex, the sides almost straight behind, and strongly rounded in front, the hind angles rectangular, the disc obsoletely canaliculate, and shallowly transversely impressed before the base, the basal foveæ rather shallow, the surface moderately finely and somewhat closely punctured; elytra very little wider than the prothorax at the base (the sides forming almost a continuous line with the prothorax), narrowing gradually from a little below the base, with moderately deep and closely punctured striæ, the interstices feebly convex and rather coarsely punctured, the apices rounded in both sexes; beneath sparsely but coarsely punctured; legs and antennæ more or less ferruginous, the femora usually darker.

♂. Anterior tibiæ sinuous within. The lateral lobes of the last ventral segment very long and narrow, much recurved beneath and hook-like (the recurved portion extending back about one third of the length of the

lobe), and with an abrupt notch on the inner side above; the central sheath broad, narrowed, and acuminate towards the apex, the apical portion strongly recurved and hooked beneath. (Figg. 21 *a*, *b*.)

Length $8\frac{1}{3}$–$11\frac{1}{2}$ millim.; breadth $3\frac{1}{3}$–4 millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*), N. Yucatan (*Gaumer*).

A large number of examples. This species is distinguished by its fusiform shape, anteriorly narrowed and convex thorax, and by the very peculiar structure of the œdeagus of the male; in the last-named character it departs widely from the other *Lobopodæ* here enumerated. Labelled *L. lævicollis*, Chevr., in the Sallé collection.

The North-American *Allecula erythrocnemis* (Germ.) is an ally of this species.

27. **Lobopoda proxima.** (Tab. XVIII. fig. 1.)

Moderately elongate, subfusiform, brownish-piceous or black, slightly shining. Head very sparsely punctured; eyes very large and approximate in the male, more distant in the female; prothorax transversely convex, comparatively broad, the sides straight (or a little narrowing) behind, the hind angles subrectangular or obtuse, the disc obsoletely canaliculate, the basal foveæ very shallow, the surface finely and very sparsely punctured; elytra with closely punctured rather deep striæ, the interstices feebly convex at the sides and apex, flat on the disc, and finely and very sparsely punctured; beneath sparsely and somewhat coarsely punctured; legs brownish-piceous or ferruginous, the tarsi and antennæ ferruginous.

♂. Anterior tibiæ sinuous within. The lateral lobes of the last ventral segment long, parallel to the middle, and then inwardly curved, the apices very bluntly rounded off, and furnished with short teeth within; the central sheath narrowing towards the apex, the latter slightly rounded. (Fig. 1.)

Length $8\frac{1}{2}$–$9\frac{1}{2}$ millim.; breadth 3–$3\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Temax in N. Yucatan (*Gaumer*).

Five examples, two of which are males. This species closely resembles *L. lævicollis*; but differs in the thorax being relatively broader and more transverse, in the rather less elongate shape, and in the wholly different structure of the œdeagus. From *L. oblonga* (which it more nearly resembles in the last-named character) it is distinguished by the much sparser punctuation of the head and thorax. In the female examples the hind angles of the thorax are more obtuse than in the males.

28. **Lobopoda jalapensis.** (Tab. XVIII. fig. 2.)

Moderately elongate, subfusiform, piceous-black, not very shining, thickly pubescent. Head with rather coarse scattered punctures; eyes moderately large and subapproximate in the male; prothorax convex in front, the sides rather strongly narrowed and rounded anteriorly and almost straight behind, the hind angles rectangular, the disc very obsoletely canaliculate, and a little flattened behind, the basal foveæ small and shallow, the surface closely, subequally, and moderately coarsely punctured; elytra distinctly wider than the prothorax at the base, narrowing gradually from a little below the shoulders, with moderately deep and closely punctured striæ, the interstices feebly convex, and rather coarsely punctured; beneath coarsely and somewhat closely punctured, the middle of the metasternum more closely so in the male; legs and antennæ dark ferruginous, the femora darker.

♂. Anterior tibiæ sinuous within. The lateral lobes of the last ventral segment rather short and broad, deeply notched within on the lower side about the middle, behind which the sides are angularly extended inwards, the apices broadly rounded; the central sheath rather narrow, acuminate towards the end, the apical portion setose beneath and slightly recurved, the apex a little thickened. (Fig. 2.)

Length 10–$10\frac{1}{2}$ millim.; breadth $3\frac{2}{3}$–4 millim. (♂.)

Hab. Mexico, Jalapa (*Höge*).

Three male examples. This species is allied to *L. lævicollis*, from which it differs in its much more closely punctured thorax, and the very differently shaped œdeagus.

29. **Lobopoda parvula.** (Tab. XVIII. fig. 3.)

Moderately elongate, subfusiform, piceous-black, rather dull, thickly pubescent. Head with scattered coarsish punctures; eyes large and subapproximate in the male, narrowly separated in the female; prothorax convex in front, the sides straight behind, the hind angles rectangular, the disc obsoletely canaliculate, and shallowly impressed before the base, the basal foveæ moderately deep, the surface moderately closely and somewhat coarsely punctured; elytra gradually narrowing from a little below the base, with closely punctured shallow striæ, the interstices feebly convex, almost flat on the basal half of the disc, and shallowly and finely punctured; beneath coarsely and sparsely punctured, more closely so on the hinder part of the metasternum in the male; legs and antennæ brownish-piceous, the tarsi lighter.

♂. Anterior tibiæ slightly widened on the inner side before the middle. The lateral lobes of the last ventral segment rather short, curved, and somewhat thickened at the apex; the central sheath narrow and acuminate. (Fig. 3.)

Length $7\frac{1}{4}$–8 millim.; breadth $2\frac{1}{2}$–3 millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*).

Five examples. *L. parvula* in its general shape resembles *L. lævicollis*; but differs in its much smaller size, duller surface, more lightly impressed and more finely punctured elytral striæ, flatter and more finely punctured interstices, and very differently shaped œdeagus.

30. **Lobopoda minuta.** (Tab. XVIII. fig. 4.)

Moderately elongate, rather convex, brownish-piceous, shining, sparsely pubescent. Head with scattered punctures; eyes large and subapproximate in the male; prothorax convex, coarsely and rather closely punctured, the disc shallowly transversely impressed before the base, the basal foveæ rather deep and extending forwards, the hind angles subacute; elytra narrowing from a little below the base, with coarsely punctured rather deep striæ, the interstices slightly convex and sparsely but comparatively coarsely punctured; beneath somewhat coarsely and rather closely punctured; legs and antennæ fusco-ferruginous, the femora darker.

♂. Anterior tibiæ angularly widened on the inner side before the middle. The lateral lobes of the last ventral segment rather short, and curved inwards, the apices blunt, the inner edges finely serrate; the central sheath narrow and acuminate. (Fig. 4.)

Length 6 millim.; breadth $2\frac{1}{4}$ millim. (♂.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

One male example. This is one of the smallest known species of the genus; it resembles *L. apicalis*, *L. atrata*, &c., in its general shape. The four basal joints of the anterior tarsi are only very feebly lobed beneath.

31. **Lobopoda tenuicornis.** (Tab. XVIII. figg. 5, 5 *a*, ♂.)

Moderately elongate, brownish-piceous, rather dull, the elytra slightly shining, thickly pubescent. Head comparatively broad, with scattered rather coarse punctures; eyes very large and approximate in the male, much smaller and widely separated in the female; antennæ ferruginous, long, very slender, joints 4–11 each widest at the middle; prothorax widest at the base, the sides somewhat rapidly converging from the acute hind angles, the disc almost unimpressed, the basal foveæ very shallow, the surface very shallowly, rather closely, and somewhat finely punctured, the punctures on the disc exceedingly shallow

and each surrounded by a slightly raised ring, the basal margin with a complete row of closely placed punctures; elytra moderately long, a little rounded at the sides, somewhat rapidly narrowing from about (or a little before) the middle, with deep and very closely punctured striæ, the interstices convex, flatter on the basal half of the disc, and sparsely but coarsely punctured; beneath brownish-piceous, the ventral surface with scattered rather coarse punctures and wrinkles, the metasternum closely and finely punctured, more coarsely and more sparsely so at the sides, and longitudinally impressed in the middle; legs long and slender, fusco-ferruginous, the femora piceous; penultimate joint of the four anterior tarsi very narrowly lobed beneath.

♂. Anterior tibiæ simply curved, the inner edge not widened. The lateral lobes of the last ventral segment moderately long, inwardly curved, the apices blunt and bent inwards, the inner edges denticulate; the central sheath rather broad, acuminate, the apex bent a little upwards and feebly setose beneath. (Fig. 5 *a*.)

Length $7\frac{1}{4}$–9 millim.; breadth $2\frac{1}{2}$–$3\frac{1}{4}$ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Numerous examples. This insect has a different facies from any other of the genus known to me; in the very slender antennæ it approaches *L. femoralis*, and in the thoracic sculpture *L. sculpturata*. The head is comparatively broad; the sculpture of the thorax consists of rather fine punctures, each puncture on the disc being surrounded by a slightly raised ring; the anterior tibiæ in the male are simply curved. The penultimate joint of the anterior and intermediate tarsi is very narrowly lobed beneath in this species; and the antennæ have their joints 4–11 widest at the middle.

** *Upper surface golden-green or æneous.*

Anterior tarsi in the male with the four basal joints lobed beneath.

32. **Lobopoda viridis.** (Tab. XVIII. figg. 6, 6 *a*, *b*, ♂.)

Elongate, bright greenish-æneous or golden-green, somewhat thickly clothed with ashy pubescence. Head sparsely punctured; eyes very large and approximate in the male, smaller and narrowly separated in the female; prothorax very sparsely and rather finely punctured, the sides a little sinuate behind, the hind angles obtusely rectangular, the disc very distinctly canaliculate, and somewhat deeply transversely impressed before the base, the basal impression extending to the deep foveæ; elytra long, rather broad, gradually narrowed from a little below the base, with rows of rather distantly placed impressions which gradually become coarser and more and more elongate posteriorly and towards the apex are here and there confluent, the interstices almost flat and very sparsely but rather coarsely punctured; beneath dark bronze, very sparsely and rather finely punctured, the fifth ventral segment shallowly impressed in the middle in both sexes; legs dark bronze, the tarsi lighter; antennæ fusco-ferruginous.

♂. Anterior tibiæ triangularly widened on the inner side a little beyond the middle; anterior femora towards the base a little thickened and very bluntly toothed on the inner side, the inner edge slightly emarginate and obsoletely denticulate. The lateral lobes of the last ventral segment rather short and broad, deeply and abruptly notched on the lower side externally, the apical portions bifurcate and with their lower branch the broadest and clothed with a few long fine hairs; the central sheath rather broad, gradually narrowing, more sharply so towards the apex, the apical portion setose on each side. (Figg. 6 *a*, *b*.)

Length 11–15 millim.; breadth 4–5 millim. (♂ ♀.)

Hab. Mexico, Cordova (*Sallé*), Misantla (*Höge*); Nicaragua, Chontales (*Belt*).

Seven examples. This species will be readily identified from the description; it cannot be confounded with any other of the genus here described. *L. viridis* varies very considerably in size.

33. **Lobopoda foveata.** (Tab. XVIII. figg. 7, 7 *a*, ♂.)

Moderately elongate, rather broad, æneous, sometimes with a slight greenish tint, thickly pubescent. Head closely and rather coarsely punctured; eyes large and narrowly separated in the male, smaller and more widely separated in the female; prothorax coarsely and rather closely punctured, the disc obsoletely canaliculate (except in front), and deeply impressed in the middle before the base, the basal foveæ very deep, the hind angles subrectangular; elytra moderately long, rather broad, gradually narrowing from a little below the base, with rows of comparatively coarse not very closely placed punctures placed upon almost obsolete striæ, the striæ deeper towards the apex, the interstices almost flat, a little convex behind, and very sparsely but rather coarsely punctured; beneath dark bronze, sparsely but rather coarsely punctured, the fourth and fifth ventral segments smoother; legs and antennæ fusco-ferruginous, the femora darker.

♂. Anterior tibiæ slightly widened on the inner side before the middle. The lateral lobes of the last ventral segment short and broad, strongly curved, deeply concave and spoon-shaped, the apices broadly rounded; the central sheath narrow, acuminate, the apical portion setose beneath and recurved, the apex blunt. (Fig. 7 *a*).

Length 9½–11½ millim.; breadth 3–4 millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui, David, La Caldera, Tolé (*Champion*).

Eight examples. Comparatively much shorter than *L. viridis*, the eyes smaller, the thorax much more closely and more coarsely punctured, the elytra with rows of punctures placed upon exceedingly shallow striæ, the upper surface not quite so shining, &c. The œdeagus is of a very different structure; it rather closely resembles that of *L. opaca*.

34. **Lobopoda æneotincta.**

Elongate, rather broad, æneous or greenish æneous, thickly pubescent. Head with scattered coarse punctures; eyes (♀) very large and narrowly separated; prothorax rather finely and not very closely punctured, the disc obsoletely canaliculate, and shallowly impressed in the middle before the base, the basal foveæ rather deep; elytra long, somewhat rapidly narrowing from a little below the base, with closely punctured striæ, the striæ deeper towards the apex, the interstices almost flat, feebly convex behind, and sparsely but rather coarsely punctured; beneath dark bronze, sparsely but rather coarsely punctured; legs and antennæ fusco-ferruginous, the femora darker.

Length 11–11½ millim.; breadth 3⅔–4 millim. (♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

Two female examples. This insect closely resembles *L. foveata*; it differs as follows:—The head is not so closely punctured; the eyes (in the female) are much larger and more narrowly separated; the thorax is more finely punctured and has shallower basal impressions; and the elytra are longer, and have closely punctured striæ.

35. **Lobopoda pilosa.**

Moderately elongate, æneous, not very shining, thickly pubescent. Head with scattered coarse punctures; eyes (♀) large and rather narrowly separated; prothorax finely and rather sparsely punctured, the disc canaliculate, and depressed in the middle before the base, the basal foveæ moderately deep; elytra moderately long, very gradually narrowing posteriorly, about as wide at the middle as at the base, and rather broad behind, with finely and closely punctured fine shallow striæ, the striæ a little deeper towards the apex, the interstices almost flat, feebly convex behind, and rather closely punctured; beneath brownish-bronze, sparsely and rather finely punctured; legs and antennæ fusco-ferruginous.

Length 9½ millim.; breadth 3–3¼ millim. (♀.)

Hab. Mexico, Tapachula in Chiapas (*Höge*); Guatemala, Coatepeque 1300 feet (*Champion*).

Two female examples. This species is closely allied to *L. æneotincta*, but is separated by the elytra being shorter and more ovate in shape and with shallower and more finely punctured striæ; and the thorax is more finely punctured and more distinctly canaliculate. The two known localities for *L. pilosa* are both on the Pacific slope, and are not very far distant from each other.

b. *Body glabrous.*

Anterior tarsi in the male with the four basal joints lobed beneath; the four basal joints of the intermediate tarsi (in those species of which the males are known) also more or less lobed beneath in this sex.

* *Upper surface bright metallic green or æneous.*

36. **Lobopoda nitens.** (Tab. XVIII. fig. 8, ♀.)

Elongate, rather convex, bright metallic green with a slight brassy tint, glabrous. Head exceedingly finely and remotely punctured; eyes (♀) moderately large, rather narrowly separated; prothorax convex, the sides deeply sinuate-emarginate behind the middle and the lateral margins at this part impressed within, the hind angles rather obtuse, the disc rather deeply transversely impressed in the middle before the base, the basal foveæ very deep, the surface very minutely and remotely punctured, the median lobe at the base rather deeply emarginate; scutellum convex; elytra very long, very gradually narrowing from a little below the base, the apices somewhat produced and slightly pointed, with rows of moderately coarse, oblong, rather distantly placed impressions, the impressions becoming finer towards the apex, the interstices flat throughout and impunctate; beneath dark bronze with a cupreous tint, almost impunctate; legs and antennæ dark bronze, the former very sparsely pubescent.

Length 11½ millim.; breadth 4 millim. (♀.)

Hab. Costa Rica, R. Sucio (*Rogers*).

One female example. Allied undescribed forms from Colombia and Brazil exist in collections. *L. cærulescens*, Kirsch, from Bogota, somewhat approaches *L. nitens*, but differs in several important particulars.

37. **Lobopoda irazuensis.** (Tab. XVIII. figg. 9, 9 *a*, ♂.)

Moderately elongate, subparallel, æneous with a slight golden tint, shining, glabrous. Head with very fine scattered punctures; eyes moderately large and rather widely separated in the male, smaller and more distant in the female; prothorax convex, the sides almost straight (though a little sinuate) behind, the hind angles subacute, the disc shallowly transversely impressed before the base, the basal foveæ deep, the surface very minutely and sparsely punctured, more closely and more distinctly so on the basal half of the disc; elytra subparallel in their basal half, the suture longitudinally depressed below the scutellum, with finely and closely punctured very fine shallow striæ, the interstices flat and impunctate; beneath dark bronze, the ventral surface remotely and minutely punctured and with shallow longitudinal wrinkles, the metasternum longitudinally impressed and with scattered punctures which are very coarse at the sides and fine in the middle; legs sparsely pubescent, dark bronze, the tarsi lighter; antennæ fusco-ferruginous.

♂. Anterior tibiæ sinuous, very distinctly widened on the inner side about the middle; anterior and intermediate tarsi with the four basal joints lobed beneath. Metasternal depression deep, rather closely punctured within. Second ventral segment carinate down the middle, the third segment very feebly so towards the base, the fifth segment unimpressed. The lateral lobes of the last ventral segment rather short, wide at the base, and narrowing and inwardly curved outwardly, the apices blunt, the inner edges denticulate; the central sheath rather broad, the apical portion somewhat spoon-shaped, the apex slightly widened but narrowing and bent a little downwards in front. (Fig. 9 *a*.)

Length $9\frac{1}{2}$ millim.; breadth $3\frac{1}{4}$–$3\frac{1}{3}$ millim. (♂ ♀.)

Hab. Costa Rica, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Two examples. This species is distinguished by its subparallel shape, æneous surface, very finely and closely punctured elytral striæ, flat interstices, and remarkable sexual characters; in this last respect it approaches *L. cariniventris*. *L. irazuensis* is not very nearly allied to any other species of the genus known to me.

38. Lobopoda nitida.

Rather short, somewhat convex, bright æneous, glabrous. Head with scattered coarsish punctures; eyes (♀) moderately large, rather widely separated; prothorax convex, the sides straight behind, the hind angles rectangular, the disc finely canaliculate behind, and a little flattened in the middle before the base, the basal foveæ small but deep, the surface finely and moderately closely punctured; elytra rather short, a little rounded at the sides, gradually narrowing from a little before the middle, with narrow but deep striæ, the striæ with oblong, rather distantly placed, coarsish punctures which (like the striæ) become shallower towards the apex, the interstices flat and almost impunctate; beneath brownish-piceous, the metasternum coarsely and rather closely punctured all over, the ventral surface smooth and almost impunctate; legs very sparsely pilose, ferruginous, the femora darker; antennæ ferruginous.

Length 7 millim.; breadth $2\frac{3}{4}$ millim. (♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

One female example. *L. nitida* is intermediate between *L. viridipennis* and *L. æneipennis*, but abundantly distinct from either; from the former it is distinguished by its æneous thorax, deeper elytral striæ, shorter form, &c., and from the latter by its bright æneous upper surface, flat elytral interstices, &c.

** *Upper surface brownish-black, the elytra more or less æneous; form oblong.*

39. Lobopoda viridipennis. (Tab. XVIII. figg. 10, 10 *a*, ♂.)

Moderately elongate, rather broad and convex, brownish-black, the elytra golden-green, shining, glabrous. Head finely and remotely punctured; eyes large and subapproximate in the male, somewhat widely separated in the female; prothorax convex, the sides sinuate behind, the hind angles obtusely rectangular, the disc very shallowly transversely impressed in the middle before the base, the surface exceedingly finely and somewhat remotely punctured; elytra rather broad, gradually narrowing from a little below the base, with very fine lightly impressed striæ, the striæ with fine oblong impressions which (like the striæ) become still finer towards the apex, the interstices broad and flat throughout and each with a row of exceedingly minute punctures down the middle; beneath brownish-black, almost impunctate, the middle of the metasternum and the fifth ventral segment only with a few fine scattered punctures, the metasternum longitudinally grooved in the centre; legs sparsely pilose, brownish-black, the tarsi lighter; antennæ piceous or fusco-ferruginous.

♂. Anterior tibiæ subangularly widened on the inner side before the middle. The lateral lobes of the last ventral segment moderately long, thin, and inwardly curved, rounded at the apex; the central sheath rather broad, the apical portion horizontal and narrowing behind, the extreme apex abruptly widening out on each side and almost truncate. (Fig. 10 *a*.)

Length $8\frac{1}{2}$–$9\frac{1}{2}$ millim.; breadth 3–$3\frac{1}{2}$ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Four examples. *L. viridipennis*, as will be seen from the description, is not very nearly allied to any other species noticed here; it comes nearest to *L. obsoleta*.

A closely allied undescribed form, from Chanchamayo, Peru, is contained in Mr. F. Bates's collection.

40. **Lobopoda æneipennis.** (Tab. XVIII. figg. 11, 11*a*.)

Moderately elongate, rather convex, brownish-black, the elytra æneous in tint, slightly shining, glabrous. Head with scattered fine punctures; eyes very large and approximate in the male, smaller and rather widely separated in the female; prothorax convex, the sides straight or a little sinuate behind, the hind angles subrectangular, the disc very shallowly transversely impressed in the middle before the base, the basal foveæ rather deep, the surface finely and somewhat closely punctured; elytra moderately long, a little rounded at the sides, somewhat rapidly narrowing from about the basal third, with rather coarsely and not very closely punctured deep striæ, the interstices moderately convex throughout and impunctate; beneath brownish-piceous, the metasternum coarsely punctured, the ventral surface with exceedingly fine scattered punctures and very shallow longitudinal wrinkles; legs sparsely pilose, fusco-ferruginous, the femora darker; antennæ ferruginous.

♂. Anterior tibiæ subangularly widened on the inner side before the middle. The lateral lobes of the last ventral segment narrow but rather stout, moderately long, strongly curved, the apices blunt; the central sheath acuminate, the apex a little widened and bluntly rounded. (Figg. 11, 11 *a*.)

Length $7\frac{1}{2}$–$8\frac{1}{3}$ millim.; breadth $2\frac{3}{4}$–3 millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Four examples. *L. æneipennis* closely resembles *L. obsoleta*; it differs in the thorax being more convex, and in the elytra being of a more æneous tint, with deeper and less finely punctured striæ, and more convex interstices.

*** *Upper surface brownish-black, the elytra sometimes lighter in tint; form oblong.*

41. **Lobopoba cariniventris.**

Moderately elongate, rather convex, brownish-black, the elytra dark castaneous, moderately shining, glabrous. Head with a few very fine widely scattered punctures; eyes moderately large and narrowly separated in the male, much smaller and widely separated in the female; prothorax convex, the sides almost straight or a little sinuate behind, the hind angles rectangular or subacute, the disc slightly transversely depressed at the base between the moderately deep foveæ, the surface very finely and very sparsely punctured (in one example rather more closely so); elytra about as wide at the middle as at the base, gradually narrowed behind, with deep and moderately coarsely punctured striæ, the interstices slightly convex and impunctate; beneath more shining, the ventral surface almost impunctate but with very shallow longitudinal wrinkles, the metasternum longitudinally impressed in the middle behind and with coarse scattered punctures all over; legs sparsely pilose, brownish-piceous, the tarsi ferruginous; antennæ testaceous.

♂. Anterior tibiæ a little widened on the inner side before the middle; the metasternal depression deep,

slightly carinate in the middle, the sides of the depression very closely punctured; ventral segments 1–3 very sharply and strongly carinate down the middle, 5 foveolate in the centre. The lateral lobes of the last ventral segment rather long and stout, a little curved towards the apex, the apices blunt; the central sheath compressed, widening outwardly and narrowed a little towards the end, the apical portion somewhat shovel-shaped, the apex rather broadly truncate and slightly hooked above. (Tab. XVIII. fig. 12.)

Length 7½–8 millim.; breadth 3–3¼ millim. (♂ ♀.)

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Five examples. This insect possesses very remarkable sexual characters. It is one of several allied forms inhabiting Central America.

42. **Lobopoda obsoleta.** (Tab. XVIII. fig. 13.)

Moderately elongate, blackish-bronze, moderately shining, glabrous. Head finely and rather sparsely punctured; eyes very large and approximate in the male; prothorax a little sinuate at the sides behind, the hind angles rectangular or subacute, the disc slightly transversely depressed in the middle before the base, the basal foveæ rather deep, the surface finely and rather closely punctured, a narrow longitudinal space on the disc impunctate; elytra rather rapidly narrowing from about the basal third, with deep finely punctured striæ, the striæ still more finely punctured towards the suture, the interstices slightly convex and impunctate; beneath more shining, the ventral surface almost impunctate but with very shallow longitudinal wrinkles, the metasternum with a few fine scattered punctures in the middle and some shallow coarse ones at the sides, the fifth ventral segment unimpressed; legs sparsely pilose, brownish-piceous, the tarsi lighter; antennæ varying in colour from testaceous to piceo-ferruginous.

♂. Anterior tibiæ angularly widened on the inner side before the middle. The lateral lobes of the last ventral segment long, thin, and curved, rounded at the apex; the central sheath broad, the apical portion horizontal, somewhat spoon-shaped, and narrowing towards the apex, the extreme apex abruptly widening out on each side and truncate. (Fig. 13.)

Length 8–8⅓ millim.; breadth 3–3¼ millim. (♂.)

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Capetillo, Volcan de Atitlan (*Champion*).

Three male examples. *L. obsoleta* closely resembles *L. cariniventris*; it is, however, readily separated by the more finely punctured elytral striæ (especially noticeable on the disc), the larger eyes, the much smoother metasternum, the ventral surface in the male not carinate or impressed, &c., as well as by the differently shaped œdeagus.

43. **Lobopoda glabrata.** (Tab. XVIII. figg. 14, 14 *a*, ♂.)

Moderately elongate, black or brownish-black, shining, glabrous. Head with scattered fine punctures; eyes moderately large, narrowly separated in the male, more distant in the female; prothorax convex, sinuate at the sides behind, the hind angles rectangular or subacute, the disc with a shallow depression at the base between the deep foveæ, the surface exceedingly finely and remotely punctured; elytra moderately long, very gradually narrowed from a little below the base, rather more parallel in the female, with finely and somewhat remotely punctured very deep striæ, the interstices convex, very strongly so towards the apex, and impunctate; beneath brownish-piceous, the ventral surface closely and moderately finely punctured, the metasternum very much more coarsely and sparsely so, the fifth ventral segment broadly and shallowly impressed in the middle in both sexes; legs sparsely pilose, brownish-piceous, the tarsi lighter; antennæ piceo-ferruginous.

♂. Anterior tibiæ subangularly widened on the inner side before the middle. The lateral lobes of the last ventral segment moderately long, slender, inwardly curved, the apices bent downwards and slightly hooked; the central sheath compressed, widening outwards, the apical portion somewhat spoon-shaped,

narrowing and produced towards the apex, and armed with a few short coarse setæ beneath, the extreme apex a little widened and rounded. (Fig. 14 *a*.)

Length 8½–10 millim.; breadth 3¼–3¾ millim. (♂ ♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui, La Caldera (*Champion*).

Three examples. From *L. obsoleta* and *L. cariniventris* this species may be distinguished by its rather larger size, smoother thorax, and the much more deeply striate elytra, &c.; the apical interstices of the latter are very sharply raised.

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44. Lobopoda ——?

Hab. Costa Rica, Cache (*Rogers*).

A single male example of a species no doubt belonging to this genus, and perfectly distinct from any other here enumerated; the unique individual is without head. The following is a brief description:—

Elongate, narrow, subparallel, sparsely pubescent, dark bronze, shining; prothorax sparsely but somewhat coarsely punctured, the sides almost straight behind, the disc shallowly canaliculate; elytra subparallel in their basal half, with closely and rather coarsely punctured striæ, the striæ deep towards the apex, the interstices feebly convex and very sparsely punctured; beneath with scattered coarse punctures, the metasternum very coarsely punctured at the sides and closely and more finely so in the middle.

♂. Anterior femora incrassate, the anterior tibiæ widened on the inner side before the middle; the lateral lobes of the last ventral segment broad, long, and curved, spoon-shaped, broadly rounded at the apex; the central sheath gradually narrowing behind, and rounded at the apex.

Length 11 millim.; breadth 3½ millim. (♂.)

TEMNES.

Last joint of the labial palpi broad, triangular; last joint of the maxillary palpi very stout, broadly triangular, its apical side longer than the outer; mandibles bifid, very deeply cleft; labrum very prominent, rather broader than the epistoma; eyes moderately large, widely separated; antennæ rather short, moderately slender, subfiliform, the intermediate joints the widest, joint 3 about four times as long as 2, and longer and narrower than 4, joints 4–11 gradually decreasing in length; prothorax transverse, subquadrate, rather convex, the sides feebly margined, the margins not visible from above; elytra much wider than the prothorax; intercoxal process narrowly triangular; anterior and intermediate tarsi with the third and fourth joints strongly and equally, and the posterior tarsi with the penultimate joint, lobed beneath; first joint of the posterior tarsi long, as long as the following three joints united; fifth ventral segment in the male abnormal; prosternum abruptly declivous behind; body oblong ovate, hirsute.

The single species included in this genus has much the facies of certain forms of *Lystronychus* or *Xystropus*; it is, however, at once separated by the very deeply cleft mandibles, broadly lobed tarsi, and other particulars noticed above. *T. cæruleus* has very remarkable male characters.

1. Temnes cæruleus. (Tab. XVIII. figg. 15, ♂; 15 *a*, mandible.)

Oblong ovate, rather convex, bright metallic cæruleous with a violaceous tinge, thickly clothed with long bristly hairs. Head coarsely and rather sparsely punctured; prothorax convex, transverse, the sides rounded in front and straight from before the middle to the base, the hind angles rectangular, the basal foveæ small and very short (in great part hidden by the convexity of the surface), the disc unimpressed,

the surface coarsely, equally, and rather closely punctured; scutellum rather large, subtriangular, coarsely punctured; elytra moderately long, rather strongly impressed on each side at the base within the broadly rounded humeri, subparallel in their basal half and thence rounded and narrowing to the apex, with rows of rather coarse and somewhat closely placed punctures which become coarser towards the sides and finer towards the apex, the interstices flat and each with a median row of punctures which upon the disc are almost as coarse as those of the striæ; beneath sparsely pubescent, cæruleous with bronzy tints, the fifth ventral segment fusco-testaceous; the metasternum longitudinally impressed in the middle, very sparsely and finely punctured, and with coarse impressions at the sides, the ventral surface finely and more closely punctured, the fifth ventral segment with coarse scattered impressions in the middle; legs and antennæ cæruleous, thickly clothed with bristly hairs.

♂. Anterior tibiæ sinuous within. Fifth ventral segment flattened, almost transparent, very long and projecting, the sides subparallel and visible from above, the apical angles rounded, the apex broad and emarginate, the base deeply transversely impressed in the middle and articulated to the preceding segment by a broad membranous space; apical margin of the fourth segment sinuate-emarginate and a little thickened. The lateral lobes of the last ventral segment very broad, long, and curved, and somewhat spoon-shaped, and broadly rounded and a little thickened at the apex.

Length 6½ millim.; breadth 2⅓ millim. (♂.)

Hab. Panama, Bugaba 1000 feet (*Champion*).

A single male example.

ALLECULA.

Allecula, Fabricius, Syst. Eleuth. ii. p. 21 (1801); Lacordaire, Gen. Col. v. p. 502 (1859).

Dietopsis, Solier, Ann. Soc. Ent. Fr. iv. p. 236 (1835), and in Gay's Historia fisica y polit. de Chile, Zool. v. p. 248 (1851).

A large number of species have been referred to this genus, chiefly from the tropical regions of the Old and New Worlds. Eleven species only from Central America are here included in it, the numerous allied forms being referred to other genera. *Allecula* at present contains a very heterogeneous assemblage of species from all parts of the world; and, when the numerous forms existing in collections are all described, will doubtless have to be extensively divided. The three North-American species referred to it belong to *Lobopoda* as here understood. In the Central-American species the anterior and intermediate tarsi have the third and fourth joints, and the posterior tarsi the penultimate joint, more or less lobed (very broadly in *A. castaneipennis*) beneath; in the males of *A. ferox*, *A. gaumeri*, and *A. pilipes* the first and second joints of the anterior tarsi are also lobed. In the male of *A. ferox* the lateral lobes of the last ventral segment are greatly developed and each divided into two parts (one above the other), and in the female the fifth ventral segment exhibits a peculiar modification, the species thus differing in a remarkable way from the allied forms.

In *A. belti* and *A. pilipes* the mandibles are truncate at the apex, and in *A. ferox* they are also broad and subtruncate, though feebly notched; but on this character alone it is not advisable to separate these species, connected as they are by intermediate forms. In all the species here included in the genus the antennæ are very long and more or less filiform in both sexes; in one or two, however, joints 4–10 are each a little dilated at their inner apical angle. *A. depressa* and the following three species differ from the

others in their more depressed form, faint sculpture, flat elytral interstices, comparative small and transversely convex thorax, and feebly lobed tarsi; but I am unable satisfactorily to separate them from *Allecula*.

1. *Tarsi broadly lobed beneath; form oblong ovate; elytra rather deeply punctate-striate or with striæ of coarse punctures.*

1. **Allecula castaneipennis.** (Tab. XVIII. fig. 16, ♀.)

Moderately elongate, brownish-piceous, the elytra more or less castaneous, rather dull, almost glabrous. Head very closely and moderately finely punctured; mandibles slender, deeply cleft; antennæ (♀) slender, ferruginous or fusco-ferruginous; prothorax narrow, subcylindrical, nearly as long as broad, the sides almost straight from the middle to the base and gradually narrowing in front, the hind angles obtusely rectangular, the basal foveæ small but rather deep, the surface very closely and coarsely punctured; scutellum very finely and sparsely punctured; elytra long, much wider than the prothorax, a little rounded at the sides but almost parallel in their basal half, with somewhat coarsely and closely punctured rather deep striæ, the interstices convex, flatter on the basal half of the disc, and with widely scattered minute punctures; beneath more shining, sparsely and somewhat finely, the sides of the metasternum and the flanks of the prothorax very coarsely, punctured, the sides of the ventral segments exceedingly closely and minutely punctured and very finely pubescent; legs fusco-ferruginous, thickly pubescent, the penultimate joint of the tarsi very broadly lobed beneath.

Length 10–12¼ millim.; breadth 3–4 millim. (♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).—Colombia, Bogota (*coll. F. Bates*); Amazons, Pará (*H. W. Bates*).

Three female examples. This widely distributed insect has the penultimate joint of the tarsi very broadly lobed beneath, and is further distinguished by its coarsely and closely punctured, narrow, subcylindrical thorax, castaneous elytra, almost glabrous body, and other characters mentioned above. *A. castaneipennis* is allied to various undescribed Tropical-American species.

2. **Allecula rugicollis.** (Tab. XVIII. figg. 17, 17 *a*, ♂.)

Moderately elongate, dull brownish-piceous, the elytra usually lighter in tint, thickly clothed with short pubescence. Head very closely and rugulosely punctured; mandibles somewhat deeply cleft; antennæ rather slender, brownish-piceous; prothorax not much broader than long, very feebly convex, the sides a little rounded, widest at the middle, and almost straight or slightly narrowed behind, the basal foveæ obsolete, the surface unimpressed, and very closely, uniformly, and rugulosely punctured; scutellum very closely punctured; elytra moderately long, with rather finely punctured striæ, the punctures very closely packed, the interstices moderately convex, and very closely, finely, and subasperately punctured, the apices rounded in both sexes; beneath more shining, very closely and somewhat coarsely punctured, the sides of the metasternum and the flanks of the prothorax very coarsely so; legs brownish-piceous.

♂. Anterior tibiæ sinuous within. The lateral lobes of the last ventral segment very broadly spoon-shaped, rounded at the apex, shallowly emarginate within towards the base, and roughened; the central sheath acuminate. (Fig. 17 *a*.)

Length 10–10½ millim.; breadth 3⅔–4 millim. (♂ ♀.)

Hab. Mexico, Acapulco (*Höge*).

Six examples. This species is distinguished by its dull surface, rugulose head and thorax, slender antennæ, &c.; it is not closely allied to any other enumerated here.

3. **Allecula veræpacis.** (Tab. XVIII. fig. 18, ♀.)

Oblong ovate, rather broad, black, moderately shining, thickly clothed with short pubescence. Head closely and moderately finely punctured; mandibles broad, feebly notched; last joint of the maxillary palpi with its inner apical angle acutely produced; antennæ (♀) brownish-black, joints 4–10 each a little dilated at their inner apical angle; prothorax wide, strongly transverse, feebly convex, widest at the base, the sides sinuate behind and gradually converging from the very prominent subacute outwardly-directed hind angles, the basal foveæ scarcely indicated, the disc a little flattened before the base, the surface closely, equally, and somewhat finely but very distinctly punctured; scutellum almost smooth; elytra rather short and broad, with closely and rather finely punctured shallow striæ which become deeper towards the sides and apex, the interstices moderately convex and very sparsely and finely punctured; beneath black, more shining, somewhat closely and coarsely punctured, the metasternum deeply canaliculate in its posterior half and (except at the sides of the groove) very coarsely and sparsely punctured all over; legs black, the tarsi lighter.

Length $10\frac{3}{4}$ millim.; breadth $4\frac{1}{2}$ millim. (♀.)

Hab. Guatemala, Senahu in Vera Paz 3000 feet (*Champion*).

One female example. Somewhat resembling *A. belti*, but shorter, with more finely punctured and very differently shaped thorax, bifid mandibles, and canaliculate metasternum. *A. veræpacis* bears a close resemblance to several Australian species; it has the inner apical angles of the last joint of the maxillary palpi very acute, and may have to be eventually removed from this genus.

4. **Allecula ferox.** (Tab. XVIII. figg. 19, 19 *a*, *b*, ♂.)

Elongate ovate, black or brownish-black, rather dull, thickly clothed with short pubescence. Head very closely and rather finely punctured; mandibles broad, feebly notched; prothorax broader than long, convex, the sides rounded in front and almost straight behind, the hind angles rather obtuse, the basal foveæ almost obsolete, the base slightly emarginate in front of the scutellum and with a very short shallow longitudinal impression in front of the emargination, the surface exceedingly closely, equally, and somewhat finely punctured; scutellum rather closely and finely punctured; elytra moderately long, subparallel in their basal half, a little wider posteriorly in the female, with rather finely punctured striæ, the punctures very closely packed, the interstices moderately convex and very closely and finely punctured, the apices slightly mucronate in the female; beneath more shining, very closely and finely punctured, the sides of the metasternum and the flanks of the prothorax very coarsely so; legs brownish-black; antennæ fusco-ferruginous, the joints a little swollen towards their apex.

♂. Tibiæ curved and slightly sinuous, the anterior pair angularly widened on the inner side before the middle. Ventral segments 2–4 very feebly carinate in the middle in front, the third more distinctly so. Fifth ventral segment long, with a large, depressed, almost impunctate space in the centre, the depression followed by an abrupt and very deep transverse groove and preceded by an indistinct longitudinal elevation in the middle. The lateral lobes of the last ventral segment very greatly developed, stout, and each divided into two—the lower one strongly hooked at the apex, twisted, and abruptly curved outwards near the base, the upper one spatulate in shape and clothed with long hairs within; the central sheath broad and stout, gradually narrowing, the apex thin, rounded, and bent a little upwards, the apical portion thickly clothed with short setæ above. (Figg. 19 *a*, *b*.)

♀. Fifth ventral segment deeply and semicircularly emarginate in the middle at the apex, and with the apical margin strongly and acuminately produced on each side of the emargination.

Length 12–13 millim.; breadth $4\frac{2}{3}$–5 millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo (*Champion*).

Six examples.

5. **Allecula gaumeri.** (Tab. XVIII. fig. 20.)

Oblong ovate, black, rather dull, thickly clothed with short pubescence. Head very closely and rather finely punctured; mandibles subtruncate; antennæ long and slender, fusco-ferruginous; prothorax short and broad, transversely convex, widest about the middle, the sides a little rounded, the hind angles obtuse, the basal foveæ almost obsolete, the disc shallowly canaliculate behind, the surface very closely, equally, and rather finely punctured; scutellum sparsely punctured; elytra rather short, a little rounded at the sides, finely punctate-striate, the punctures closely packed, the interstices feebly convex and closely and finely punctured; beneath finely and rather closely punctured; the fifth ventral segment normal in both sexes; legs comparatively rather short, brownish-piceous.

♂. Anterior tibiæ slightly sinuous within. The lateral lobes of the last ventral segment perfectly connate at the base (without trace of median suture), long and very broad, spoon-shaped, inwardly curved towards the very broad apex, and hairy within, and each armed towards the base at about the middle of the concave part with a stout pointed prominence, the space between the prominences filled with membrane; the central sheath broad, its apical portion triangular and setose at the sides. (Fig. 20.)

Length 10½–11 millim.; breadth 4–4¾ millim. (♂ ♀.)

Hab. Mexico, Temax in N. Yucatan (*Gaumer*).

This species resembles *A. ferox*, but differs in its less elongate shape, in the more rounded sides of the thorax, shorter and more slender limbs, and totally different sexual characters. Five examples.

6. **Allecula pilipes.** (Tab. XVIII. figg. 21, 21 *a*, ♂.)

Moderately elongate, dull black, the elytra rather more shining, thickly clothed with short pubescence. Head coarsely and rugosely punctured; mandibles truncate; antennæ (♂) rather stout, joints 4–10 each a little dilated at their inner apical angle, black, brownish towards the apex; prothorax small, transverse, feebly convex, the sides rounded in front but straight behind, the hind angles obtusely rectangular, the basal foveæ scarcely indicated, the disc obsoletely canaliculate at the extreme base, the surface coarsely, equally, and rugosely punctured; scutellum rather large, closely punctured; elytra moderately long, much wider than the prothorax, subparallel in their basal half, with rather deep striæ, the striæ with fine very closely packed punctures, the interstices slightly convex and somewhat coarsely and closely punctured; beneath black, slightly shining, closely and coarsely punctured, the sides of the metasternum and the flanks of the prothorax very coarsely so; legs black, very closely and coarsely punctured, and thickly clothed with long hair.

♂. Anterior tibiæ sinuate on the inner side before the apex. The lateral lobes of the last ventral segment parallel to the middle and then narrowed and obliquely converging, the apices approaching close to one another; the central sheath broad, the apical portion elongate-triangular (the apex itself narrowly produced) and armed at the sides with very short coarse setæ directed backwards. (Fig. 21 *a*.)

Length 11 millim.; breadth 4 millim. (♂.)

Hab. Mexico, Jalapa (*Höge*).

One male example. This insect may be recognized by its dull black colour, rugosely punctured head and thorax, the latter much narrower than the elytra, the very hairy and roughly punctured legs, &c.

7. **Allecula belti.** (Tab. XVIII. fig. 22, ♀.)

Oblong ovate, rather broad, piceous-black, shining, thickly clothed with short pubescence. Head very closely and rather coarsely punctured; mandibles broadly truncate; antennæ fusco-ferruginous; prothorax very broad, strongly transverse, moderately convex, the sides straight from the middle to the base and obliquely

and somewhat abruptly converging in front, the hind angles sharply rectangular, the basal foveæ scarcely indicated, the surface unimpressed, and closely, coarsely, and equally punctured; scutellum sparsely punctured; elytra rather long, a little rounded at the sides, with coarsely but not closely punctured very shallow striæ, the striæ becoming much deeper and more finely punctured towards the apex, the interstices feebly convex and sparsely and finely punctured, the punctures distinctly coarser towards the apex; beneath closely and somewhat coarsely punctured, the metasternum flat and almost unimpressed in the middle, the mesosternum convex and rather abruptly declivous in front; legs brownish-piceous.

Length $12\frac{2}{3}$–14 millim.; breadth $5\frac{1}{3}$ millim. (♀.)

Hab. Nicaragua, Chontales (*Belt*).

Two female examples. The broadly truncate mandibles, very broad, strongly transverse, and coarsely punctured thorax, broad and oblong ovate shape, and other characters mentioned above, will enable this insect to be easily identified.

2. *Tarsi feebly lobed beneath; upper surface more depressed; elytra very shallowly and very finely punctate-striate.*

8. **Allecula depressa.** (Tab. XIX. figg. 1, 1 *a*, ♂.)

Elongate, rather depressed, obscure reddish-brown or brownish-piceous, slightly shining, thickly clothed with short pubescence. Head closely, irregularly, and rather finely punctured, a space on the middle of the vertex smoother; eyes comparatively large, and moderately widely separated; antennæ ferruginous; prothorax transverse, small, narrow, feebly transversely convex, the sides almost straight or very slightly narrowing behind and narrowed and a little rounded in front, the hind angles rather obtuse, the disc shallowly but somewhat broadly canaliculate, and transversely flattened before the base and apex, the basal foveæ scarcely indicated, the surface finely (but deeply), irregularly, and rather sparsely punctured; scutellum sparsely punctured; elytra long, depressed on the disc, subparallel in their basal half, much broader than the prothorax, with very fine shallow striæ, the striæ with moderately fine and closely placed punctures, the interstices almost flat, very feebly convex towards the apex, and each with about two rows of fine punctures; beneath finely and sparsely punctured, the metasternum very closely and finely so in the middle behind in the male; legs slender, fusco-ferruginous.

♂. Anterior tibiæ triangularly widened on the inner side about the middle. The lateral lobes of the last ventral segment broad at the base, narrow and slender outwardly, abruptly curved inwards about the middle, the apices blunt and almost meeting; the central sheath gradually narrowing, the apex slightly rounded, the basal part of the apical portion roughened and slightly setose on each side. (Fig. 1 *a*.)

Length $9\frac{3}{4}$–$10\frac{1}{2}$ millim.; breadth $3\frac{1}{3}$–$3\frac{1}{2}$ millim. (♂.)

Hab. Mexico (*coll. F. Bates*), Capulalpam (*Sallé*).

Four male examples. Labelled *Allecula* (?) *mexicana*, Dej., in Mr. F. Bates's collection.

9. **Allecula opacipennis.** (Tab. XIX. fig. 2.)

Moderately elongate, rather depressed, piceous-brown, rather dull, the elytra opaque, thickly clothed with short pubescence. Head closely punctured, a space on the middle of the vertex smoother; prothorax transverse, small, narrow, feebly transversely convex, the sides slightly rounded, widest at the middle, and narrowing almost as much behind as in front, the hind angles very obtuse, the disc shallowly but rather broadly canaliculate and transversely flattened before the base and apex, the basal foveæ small and shallow, the surface finely (but deeply) and rather closely punctured; scutellum finely and somewhat closely punctured; elytra moderately long, depressed on the disc, much broader than the prothorax, subparallel in their

basal half, with very fine lightly impressed striæ, the striæ with exceedingly fine, oblong, closely placed punctures, the interstices quite flat and each with about two rows of very minute punctures; beneath finely and sparsely punctured, the fifth ventral segment much more closely so, the metasternum very closely and finely punctured in the middle behind in the male; legs and antennæ ferruginous.

♂. Anterior tibiæ triangularly widened on the inner side about the middle. The lateral lobes of the last ventral segment much curved and gradually narrowing towards the apex, the apices converging towards each other; the central sheath much as in *A. depressa*. (Fig. 2.)

Length $8\frac{1}{2}$ millim.; breadth 3 millim. (♂.)

Hab. Mexico, Etla (*Sallé*).

A single male example. This species is closely allied to the preceding; it differs as follows:—The thorax is more rounded at the sides, almost as much narrowed behind as in front, and more closely punctured; and the elytra are comparatively much shorter, opaque, very lightly and minutely punctured, and with the interstices quite flat.

10. **Allecula angustata.** (Tab. XIX. fig. 3.)

Elongate, narrow, reddish-brown or brownish-piceous, scarcely shining, thickly clothed with short pubescence. Head closely but not very finely punctured; eyes rather large and convex; prothorax transverse, small, feebly transversely convex, widest at the middle, the sides a little rounded but almost straight or very slightly narrowing behind, the hind angles obtuse, the disc shallowly canaliculate, more distinctly so behind, and transversely flattened before the base, the basal foveæ small and very shallow, the surface very finely and closely punctured; scutellum somewhat closely punctured; elytra long and narrow, subparallel to beyond the middle, much wider than the prothorax, very finely and lightly punctate-striate, the interstices very feebly convex and rather closely punctured, the punctures not much finer than those of the striæ; beneath more shining, finely and sparsely punctured, the metasternal side-pieces closely and coarsely so; legs and antennæ fusco-ferruginous, the femora darker.

♂. Anterior tibiæ curved a little outwards towards the apex, unarmed on the inner side. The lateral lobes of the last ventral segment slender and curved inwards, the apices widely apart; the central sheath with its apical portion subtriangular in shape, the sides of this part armed towards the base with a few very short setæ directed backwards. (Fig. 3.)

Length $8\frac{1}{4}$–$9\frac{1}{3}$ millim.; breadth $2\frac{1}{2}$–3 millim. (♂.)

Hab. Mexico, Tula in Hidalgo, Yautepec in Morelos (*Höge*).

Three examples. Much narrower than *A. depressa*; the thorax more finely and closely punctured, the punctures of the elytral striæ much finer, the metasternal side-pieces more closely punctured, &c.

This insect approaches *Alethia högei* in its general facies; it differs, however, in the broader apical joint of the labial palpi, as well as by other characters.

11. **Allecula laticeps.** (Tab. XIX. fig. 4, ♀.)

Moderately elongate, rather broad, dull brownish-piceous or black, very sparsely clothed with pubescence. Head broad, closely and shallowly punctured, the vertex smoother; eyes (♀) rather small, very widely separated; prothorax transverse, broad, transversely convex, the sides a little rounded and narrowing almost as much behind as before, the hind angles obtuse, the disc obsoletely canaliculate and somewhat convexly raised on each side behind the middle, the basal foveæ shallow and ill-defined, the surface uneven and finely, irregularly, and rather sparsely punctured; scutellum finely and sparsely punctured; elytra rather broad, moderately long, much wider than the prothorax, widest behind the middle, the sides straight in front and obliquely cut off behind, the apices broadly rounded, with rows of moderately fine approximate punctures placed upon very shallow striæ, the interstices almost flat and each with

about two rows of exceedingly shallow fine punctures; beneath brownish, comparatively smooth, the sides of the metasternum with coarse, the fifth ventral segment with fine scattered, punctures, the ventral surface with shallow longitudinal wrinkles; antennæ ferruginous; legs rather stout, fusco-ferruginous.

Length 10–11 millim.; breadth $4\frac{1}{4}$ millim. (♀.)

Hab. Mexico, Capulalpam (*Sallé*).

Three female examples. In this insect, the male of which is unknown, the head and thorax are much broader than in the other species included in the genus, and the eyes are smaller and project very little laterally. The head is formed much as in the European *Upinella aterrima*, Muls.

ALETHIA.

Last joint of the labial palpi ovate, truncate in front; last joint of the maxillary palpi elongate-triangular, comparatively narrow (very narrow in *A. sallæi*), the outer side the longest, or the apical and outer sides about equal; mandibles feebly bifid; antennæ long or very long, filiform, varying in thickness, in some species very slender, the third joint as long as the fourth; eyes large or moderately large, not very widely separated; prothorax small, more or less transverse, narrowly margined at the sides, the base very feebly bisinuate; elytra much wider than the prothorax, long or very long, subparallel, confusedly punctured or very finely punctate-striate; legs long and slender, the first joint of the hind tarsi long (in *A. sallæi* &c. very elongate); anterior and intermediate tarsi with the third and fourth joints very feebly and narrowly lobed beneath, the penultimate joint of the posterior tarsi simple or very feebly lobed; anterior tibiæ slender, and in the male curving a little outwards towards the apex; prosternum narrow; body narrow, elongate, subparallel, more or less depressed, pubescent, winged.

Several species from Mexico agree very well *inter se* in most of the above characters. All have much the facies of *Allecula angustata* and its allies, though differing in the less widened apical joint of the labial palpi. One or two bear a superficial resemblance to certain Longicornia, e. g. *Leptura*, and one to various "Œdemerides." *A. sallæi* may be taken as the type of the genus. *Alethia* closely resembles the Madagascar genus *Stenecula*, Fairm., but differs in the smaller and more transverse eyes, slender legs, &c. In the males of the five species I have examined the lateral lobes of the last ventral segment are very similarly shaped, *i. e.* curved inwards and with their apices approaching each other.

1. **Alethia sallæi.** (Tab. XIX. figg. 5, ♂; 5 *a*, labium; 5 *b*, maxillary palpus.)

Elongate, narrow, depressed, subparallel, dull piceous-brown, the elytra rather more shining and lighter in tint, thickly clothed with short pubescence. Head very closely and rugosely punctured; eyes rather small; antennæ (♂) very long and slender, fusco-ferruginous; prothorax small, transverse, feebly convex, the sides almost straight or a little sinuate behind and gradually narrowing in front, the hind angles rectangular or subacute, the disc sometimes obsoletely canaliculate behind, the basal foveæ obsolete, the surface punctured like that of the head; scutellum closely and finely punctured; elytra very long, subparallel to beyond the middle, very much wider than the prothorax, depressed on the disc, the humeri rather swollen, the surface with shallow longitudinal grooves and very thickly, confusedly, and minutely punctured, the usual rows of punctures distinct at the extreme base only, the interstices feebly convex but flatter on the basal half of the disc; beneath closely and finely punctured; legs fusco-ferruginous, very long and slender; the tarsi very elongate and fully the length of the tibiæ, very feebly lobed beneath, the first joint of the posterior pair exceedingly long.

Length 8–9 millim.; breadth $2\frac{3}{4}$ millim. (♂.)

Hab. MEXICO, Guanajuato (*Sallé*).

Four examples. In this species, and in *A. longipennis* and *A. subnitida*, the apical joint of the maxillary palpi (fig. 5 *a*) is narrower than in the allied forms; and the tarsi are exceedingly long and slender.

2. **Alethia longipennis.** (Tab. XIX. fig. 6.)

Very elongate and parallel, narrow, slightly convex, dull piceous-brown, the elytra slightly shining, thickly clothed with short pubescence. Head very closely and rugosely punctured; eyes convex, moderately large; antennæ long and very slender, ferruginous; prothorax small, comparatively elongate, not very much broader than long, feebly convex, the sides almost straight behind and gradually narrowing in front, the hind angles rectangular, the disc a little flattened before the base, the basal foveæ obsolete, the surface punctured like that of the head; scutellum closely punctured; elytra very long, parallel to far beyond the middle, much wider and more shining than the prothorax, with narrow longitudinal grooves which become deeper towards the apex, the surface finely, thickly, and confusedly punctured, the usual rows of punctures distinct at the base only, the interstices feebly convex but flatter on the basal half of the disc; beneath sparsely and finely punctured, the sides of the metasternum more closely and more coarsely so; legs fusco-ferruginous, very long and slender, the tarsi very long and with the first joint of the posterior pair very elongate.

Length 8 millim.; breadth $2\frac{1}{2}$ millim.

Hab. MEXICO, Aguas Calientes city (*Höge*).

One example, possibly a female. Narrower and rather more convex than *A. sallæi*, the thorax less transverse, the elytra more shining and not so finely punctured. *A. longipennis* bears a strong resemblance to various "Œdemerides."

3. **Alethia subnitida.** (Tab. XIX. fig. 7, ♂.)

Elongate, narrow, subparallel, piceous-brown, slightly shining, thickly clothed with long pubescence. Head closely but not very finely punctured; eyes convex, comparatively large; antennæ (♂) long and slender, ferruginous; prothorax small, broader than long, slightly convex, the sides almost straight behind and gradually narrowing in front, the hind angles subrectangular, the disc slightly depressed before the base and apex, the basal foveæ obsolete, the surface uneven and closely and not very finely punctured; scutellum sparsely punctured; elytra moderately long, subparallel in their basal half, much wider than the prothorax, with rows of fine approximate punctures placed upon shallow striæ, the interstices almost flat, feebly convex at the apex, and finely and rather thickly punctured, the punctures of the striæ becoming finer beyond the middle and there confounded with those of the interstices; beneath closely and finely punctured; legs ferruginous, long and slender.

Length $8\frac{1}{2}$–$8\frac{3}{4}$ millim.; breadth $2\frac{3}{4}$ millim. (♂.)

Hab. MEXICO, Chilpancingo in Guerrero, Guadalajara in Jalisco (*Höge*).

Two examples only. From *A. sallæi* and *A. longipennis* this insect is easily separated by its very differently sculptured thorax (the punctures separate one from another), more shining surface, shorter elytra, longer pubescence, &c.

4. **Alethia azteca.** (Tab. XIX. fig. 8, ♂.)

Very elongate, narrow, much depressed, parallel, dull brownish-black, sparsely clothed with short pubescence. Head very closely and rugosely punctured; eyes moderately large; antennæ (♂) very long and slender, brownish-piceous; prothorax small, transverse, feebly convex, the sides almost straight behind and gradually narrowing in front, the hind angles obtuse, the disc a little flattened and shallowly impressed

before the base, the basal foveæ obsolete, the surface very closely and rugosely punctured; elytra very long, parallel to far beyond the middle, very much wider than the prothorax, much depressed on the disc, the humeri swollen and prominent, the surface very minutely punctate-striate, the interstices perfectly flat and very minutely and rather sparsely punctured, the punctures confounded with those of the striæ; beneath more shining, finely and rather closely punctured; legs brownish-piceous, very long, the tarsi especially, the first joint of the posterior tarsi exceedingly elongate.

Length 10 millim.; breadth 3 millim. (♂.)

Hab. Mexico, Guanajuato (*Sallé*).

Two male examples. This insect is allied to *A. lepturoides* and *A. sallæi*; from the former it differs in its more depressed form, longer and much more slender antennæ, very much longer elytra, more prominent humeri, shorter pubescence, and the much longer first joint of the posterior tarsi; and from the latter by its much flatter and more sparsely punctured elytra, &c. The elytra at first sight, as in several of the allied species, appear to be confusedly punctured; but when examined under a strong lens the regular rows of minute punctures can easily be detected.

5. **Alethia lepturoides.** (Tab. XIX. figg. 9, 9 *a*, ♂.)

Elongate, narrow, depressed, dull brownish-black, thickly clothed with long pubescence. Head very closely and rugosely punctured; eyes rather large and convex; antennæ (♂) long, comparatively stout, fusco-ferruginous; prothorax small, strongly transverse, moderately convex, the sides almost straight behind but rounded in front, the hind angles rather obtuse, the disc a little flattened before the base, the basal foveæ obsolete, the surface punctured like that of the head; scutellum sparsely punctured; elytra long, parallel in their basal half, depressed, very much wider than the prothorax, with rows of exceedingly minute punctures placed upon very fine obsolete striæ, the interstices flat and very minutely and rather thickly punctured, the punctures confounded with those of the striæ; beneath more shining, finely and rather closely punctured, the metasternum closely and coarsely so at the sides; legs fusco-ferruginous.

♂. The lateral lobes of the last ventral segment abruptly curved inwards about the middle, the apices blunt and converging; the central sheath rather narrow, the apical portion bent upwards, the apex blunt. (Fig. 9 *a*.)

Length 9–9⅓ millim.; breadth 2¾ millim. (♂.)

Hab. Mexico (*Sallé*).

Three examples. This species, on account of its long and rather stout antennæ and prominent eyes, has somewhat the facies of a *Leptura*.

6. **Alethia funerea.**

Elongate, rather narrow, black, opaque, thickly clothed with short pubescence. Head very closely and rugosely punctured; eyes convex, large; antennæ (♂) stout, moderately long, tapering a little outwardly, fusco-ferruginous; prothorax transverse, but not strongly so, moderately convex, the sides almost straight behind and very gradually narrowing in front, the hind angles obtuse, the disc slightly flattened before the base but otherwise unimpressed, the basal foveæ obsolete, the surface punctured like that of the head; scutellum closely punctured; elytra moderately long, subparallel, much wider than the prothorax, with rows of very minute punctures placed upon obsolete striæ, the interstices perfectly flat and with exceedingly minute punctures; beneath rather dull, finely and rather closely punctured, the metasternum closely and coarsely so at the sides; legs fusco-ferruginous.

Length 9 millim.; breadth 3¼ millim. (♂.)

Hab. Mexico, Chilpancingo in Guerrero (*Höge*).

One male example. Rather broader than *A. lepturoides*; the upper surface more opaque, the eyes larger, the thorax larger and less strongly transverse, the rows of punctures on the elytra a little more distinct, the pubescence shorter, &c.

7. **Alethia högei.** (Tab. XIX. fig. 10.)

Elongate, rather narrow, brownish-piceous, dull, the elytra a little more shining, thickly clothed with short pubescence. Head very closely and rugosely punctured; eyes (♂) comparatively small, widely separated; antennæ (♂) rather stout, tapering a little towards the apex, picco-ferruginous, the base and apex lighter; prothorax small, transverse, moderately convex, the sides slightly rounded, narrowing very little in front, and feebly sinuate behind, the hind angles subrectangular, the basal foveæ shallow but distinct, the disc a little flattened behind but not canaliculate, the surface punctured like that of the head; scutellum sparsely punctured; elytra moderately long, subparallel, much wider than the prothorax, finely punctate-striate, the punctures placed close together, the interstices very feebly convex, flat on the basal half of the disc, and thickly punctured, the punctures scarcely finer than those of the striæ; beneath more shining, sparsely but not very finely punctured, the metasternum and side-pieces closely and coarsely so; legs fusco-ferruginous.

♂. The lateral lobes of the last ventral segment somewhat spoon-shaped, curved inwards, the apices rather blunt and clothed with a few long hairs. (Fig. 10.)

Length 8 millim.; breadth $2\frac{1}{2}$ millim. (♂.)

Hab. Mexico, Chihuahua city (*Höge*).

One example. Shorter than *A. lepturoides*, the eyes smaller, the thorax with more distinct basal foveæ, the elytra relatively shorter, more shining, and more closely and not so minutely punctured, the pubescence shorter, &c.

THEATETES.

Last joint of the labial palpi broad, triangular; last joint of the maxillary palpi broadly triangular, its apical side much the longest; mandibles feebly bifid; antennæ stout, moderately long, scarcely longer in the male, joint 1 comparatively very long and stout, 2 very short and small, 3 moderately long, longer than 4 but very much shorter than 1, 4–7 about equal in length, 8–11 each a little longer than 7, 4–10 broad and widening a little towards their apex, 11 oblong ovate, 4–6 dilated on the inner side in the male; head rather deeply sunk into the prothorax; eyes transverse, moderately large and somewhat widely separated in the male, smaller and more distant in the female; prothorax short and very broad, strongly transverse, distinctly margined at the sides and base, the base strongly bisinuate; scutellum transverse; elytra a little wider than the prothorax, moderately long; legs very rough and setose, rather short and stout; anterior and intermediate tarsi with the third and fourth joints, and the posterior tarsi with the penultimate joint rather feebly lobed beneath in both sexes; prosternum declivous behind and armed with a small raised point at the apex; body oblong ovate, pubescent, winged.

This genus contains a single species from Mexico; it is at once separated from its allies by the comparatively very long and stout basal joint of the antennæ.

1. **Theatetes basicornis.** (Tab. XIX. figg. 11, 11 *a*, ♂.)

Oblong ovate, moderately convex, dull black, thickly clothed with short pubescence. Head densely and rather coarsely punctured; prothorax very broad, strongly transverse, rather convex, the sides much rounded anteriorly but nearly straight behind, the hind angles subrectangular, the basal foveæ obsolete, the disc unimpressed, the surface densely and rugosely punctured; scutellum closely punctured; elytra deeply striate, the striæ with fine oblong, subconfluent impressions, the interstices feebly convex, almost flat on the basal half of the disc, and thickly and asperately punctured; beneath more shining, coarsely and rather

closely punctured, the metasternum still more coarsely so; legs brownish-black; antennæ black or brownish-black, the extreme apex ferruginous.

♂. Antennæ with the basal joint a little longer and stouter than in the female; joint 4 triangularly dilated, joints 5 and 6 much dilated within, their inner sides rounded, each much wider than 4 or 7, 5 the widest. Anterior tibiæ unarmed. The lateral lobes of the last ventral segment long and thin, narrow, inwardly curved, and narrowing a little towards the apex. (Fig. 11 *a*.)

Length 7¾–10 millim.; breadth 3⅓–4⅓ millim. (♂ ♀.)

Hab. Mexico, Jalapa, Almolonga (*Höge*).

Six examples, two only of which are males.

CHARISIUS.

Last joint of the labial palpi broad, triangular; last joint of the maxillary palpi elongate-triangular, its apical and outer sides about equal; mandibles slightly bifid; antennæ slender or moderately slender, the joints long and subfiliform or somewhat obconic, the third joint about as long as the fourth; head not very deeply sunk into the prothorax, in *C. salvini* and *C. zunilensis* somewhat strongly exserted; eyes rather small, widely and equally separated in both sexes; prothorax much narrower than the elytra, nearly as long as broad and subcylindrical (a little depressed in *C. fasciatus*), or transverse, feebly bisinuate at the base, distinctly margined on all sides, and with a well-defined deep transverse groove behind placed immediately above and extending as far laterally as the basal foveæ; scutellum small, subtriangular; elytra long, subparallel, or a little widened posteriorly with the apices somewhat broadly produced, punctate-striate, the sutural stria usually deeply impressed, the humeri broadly rounded and shallowly impressed within; legs sparsely pilose, the femora glabrous; anterior and intermediate tarsi with the third and fourth joints and the posterior tarsi with the penultimate joint broadly lobed beneath, especially in the male, the first and second joints of the anterior pair also more or less lobed in this sex; anterior tibiæ in the male simple or a little widened on the inner side about the middle; first joint of the posterior tarsi long or very long; metasternum long (in *C. fasciatus* very long); prosternum narrow, rather convex, abruptly declivous behind; body elongate, glabrous, shining, winged.

This genus is proposed to include four species from Central America, and probably one or two others from Tropical South America, all agreeing in the above particulars. In general facies *Charisius* somewhat approaches the Australian genus *Tanychilus*; but is distinguished from it by the last joint of the maxillary palpi being stouter and more triangular in shape, and by the cleft mandibles and other characters.

From *Allecula* it is separated by the less widened apical joint of the maxillary palpi, transversely grooved thorax, and general facies.

In both sexes the third and fourth joints of the anterior and intermediate tarsi and the penultimate joint of the posterior tarsi are very distinctly lobed beneath, still more broadly so in the male. In the males of the four Central-American species the lateral lobes of the last ventral segment are a little curved and more or less spoon-shaped or spatulate in shape; and the central sheath is more or less acuminate, but with the apex rounded or slightly hooked.

1. **Charisius fasciatus.** (Tab. XIX. figg. 12, 12 *a*, ♂; 13, ♀, var.)

Elongate, shining, varying in colour—red, reddish-brown, or brownish-black, the elytra each with an oblong patch on the disc before the middle, a transverse zigzag band some distance beyond the middle (extending to the lateral margin but not to the suture), and a similar but oblique band nearer the apex, stramineous

or testaceous, the light markings more or less surrounded by brownish-black. Head sparsely and finely punctured, the vertex smoother and shallowly longitudinally impressed in the middle; prothorax narrowing anteriorly from the middle, the sides a little sinuate behind, the hind angles rather obtuse, the disc deeply canaliculate before the base and apex and somewhat flattened, the transverse basal groove and the basal foveæ very deep, the surface very finely and remotely punctured; elytra very long, widest beyond the middle, the apices somewhat broadly produced, with rows of rather fine approximate punctures placed upon shallow striæ, the interstices impunctate, flat at the extreme base, and thence gradually becoming more convex, and at the apex subangularly raised; beneath reddish-brown, the metasternum very long, shallowly canaliculate, and very finely and sparsely punctured in the middle and coarsely so at the sides, the ventral surface almost smooth, the apical margin of the fourth segment with a row of punctures, the fifth ventral segment unimpressed in both sexes; legs and antennæ varying in colour from ferruginous to brownish-black.

♂. Anterior tibiæ slightly widened on the inner side before the middle. The lateral lobes of the last ventral segment strongly curved, narrow, and somewhat spatulate in shape; the central sheath acuminate, the apex slightly rounded. (Fig. 12 *a*.)

Length $10\frac{1}{2}$–$12\frac{1}{2}$ millim.; breadth $3\frac{1}{2}$–4 millim. (♂ ♀.)

Hab. GUATEMALA, Totonicapam 8500–10,500 feet, Quiche Mountains 9000 feet (*Champion*).

Var. The discoidal spot on the elytra obsolete. (Fig. 13.)

Hab. GUATEMALA, Cerro Zunil 5000 feet, Calderas 6000 feet (*Champion*).

Eight examples, five of the typical form and three of the variety.

2. **Charisius zunilensis.** (Tab. XIX. fig. 14, ♂.)

Elongate, rather narrow, subcylindrical, reddish-brown, the prothorax and the basal half of the elytra sometimes stained with piceous, shining. Head closely and finely punctured; prothorax subcylindrical, about as long as broad, the sides narrowing a little anteriorly and rounded at the apex, and almost straight or feebly sinuate behind, the disc canaliculate (shallowly in front but very deeply so before the base), the transverse basal groove moderately deep, the basal foveæ shallow, the surface finely and closely punctured; elytra long, parallel in their basal half, deeply striate, the striæ with closely-placed rather coarse punctures which become much finer towards the apex, the sutural stria very deep, the interstices smooth and moderately convex; beneath very finely and sparsely punctured, the metasternum with coarse impressions at the sides and deeply canaliculate in the middle behind, the ventral surface still more finely punctured and with very shallow longitudinal wrinkles, the fifth ventral segment unimpressed in both sexes; legs and antennæ ferruginous, the femora sometimes a little darker.

♂. Anterior tibiæ as in the female. The lateral lobes of the last ventral segment slightly curved and spoon-shaped; the central sheath acuminate, the apical portion subparallel and with the apex rounded.

Length $8\frac{1}{3}$–9 millim.; breadth $2\frac{1}{3}$–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. GUATEMALA, Cerro Zunil 4000–5000 feet (*Champion*).

Six examples.

3. **Charisius interstitialis.**

Closely resembling *C. zunilensis*, and differing as follows:—Shorter and less cylindrical; the prothorax shorter (not so long as broad), and rather more closely punctured; the elytra shorter, less convex, the interstices more convex and finely but distinctly punctured; the rest as in *C. zunilensis*.

♂. Anterior tibiæ as in the female. The lateral lobes of the last ventral segment spoon-shaped: the central sheath acuminate.

Length $6\frac{1}{4}$–$7\frac{1}{2}$ millim.; breadth $2\frac{1}{4}$–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. MEXICO, Jalapa (*Höge*).

Numerous examples. This insect differs constantly from *C. zunilensis* in the above particulars, and I have no doubt that it is a good species; both bear a certain resemblance to the genus *Talanus*.

4. **Charisius salvini.** (Tab. XIX. fig. 15, ♂.)

Elongate, rather narrow, convex, subparallel, reddish-brown, the prothorax and the extreme apex of the elytra sometimes stained with piceous, shining. Head somewhat coarsely and rather closely punctured, a narrow longitudinal space between the eyes usually impunctate; antennæ rather stout, especially in the female; prothorax convex, rather broader than long, widest at the middle, the sides rounded, a little sinuate behind, and almost straight at the base, the hind angles rectangular, the disc shallowly canaliculate, the transverse basal groove rather deep, the basal foveæ shallow, the surface coarsely and rather closely punctured; elytra moderately long, with coarsely and closely punctured rather deep striæ, the sutural stria moderately deep, the interstices smooth and somewhat convex, more strongly so behind; beneath finely and sparsely punctured, the metasternum and the prothorax very coarsely so at the sides, the former rather shallowly canaliculate behind; legs and antennæ fusco-ferruginous or brownish-piceous.

♂. Anterior tibiæ very feebly widened on the inner side about the middle. Fifth ventral segment semicircularly excavate in the middle at the apex. The lateral lobes of the last ventral segment spatulate in shape, the apex broad and obliquely cut off; the central sheath gradually narrowing, the apical portion recurved upwards, the apex slightly hooked.

Length 9–10 millim.; breadth 2½–3 millim. (♂ ♀.)

Hab. GUATEMALA, near the city, Chinautla (*Salvin*), Dueñas (*Salvin*, *Champion*), Capetillo, Calderas, Cerro Zunil (*Champion*).

Var. The elytra each with a small spot at the middle of the disc, two smaller ones towards the apex (one on the lateral margin and one near the suture, placed transversely), and the apex, black.

Hab. GUATEMALA, Panajachel (*Champion*).

Numerous examples of the typical form, one only of the variety. Broader than *C. zunilensis*, the thorax more rounded at the sides and much more coarsely punctured, the striæ of the elytra more coarsely punctured, the sutural stria not so deeply impressed, &c.

NARSES.

Oral organs and head much as in *Charisius*; the eyes somewhat rounded and widely separated in both sexes; antennæ very long and slender, the joints obconic; prothorax subcylindrical, as long as broad, without well-defined transverse basilar groove, the base almost straight; scutellum transverse, moderately large; elytra ovate in shape, the base truncate and wider than the prothorax, the humeri more abrupt and less rounded than in *Charisius*, the sutural stria not deeply impressed; legs, including the tarsi, as in *Charisius*, but with much stouter femora; metasternum very short, deeply notched in the middle behind for the reception of the intercoxal process, the latter subtriangular and transversely convex; body glabrous, elongate ovate; wings small and not adapted for flying.

A single species from Guatemala, differing from *Charisius* in the above particulars; *N. subalatus* might perhaps be regarded as a subapterous form of that genus, but I have thought it advisable to separate it. The tarsi are broadly lobed beneath in both sexes.

1. **Narses subalatus.** (Tab. XIX. figg. 15, ♂; 16 *a*, labium; 16 *b*, maxilla and maxillary palpus.)

Elongate ovate, rather convex, reddish-brown, more or less stained with piceous, the suture of the elytra usually lighter, moderately shining. Head finely and closely punctured; eyes very widely separated; prothorax subcylindrical, rounded at the sides, widest at the middle, distinctly canaliculate, very deeply so behind and there ending in a short semicircular shallow or deeper impression, the basal foveæ small and shallow, the surface very finely and sparsely punctured; elytra moderately long, ovate, widest at the middle, flattened towards the base, with rather coarsely punctured striæ, the punctures much more scattered and still coarser towards the apex, the interstices almost flat throughout and each with a median row of very fine punctures; beneath more shining, sparsely and minutely punctured, the metasternum very coarsely at the sides and in the male exceedingly closely and finely so in the middle; the fifth ventral segment unimpressed in both sexes; legs and antennæ fusco-ferruginous, the femora often darker.

♂. Anterior tibiæ as in the female. The lateral lobes of the last ventral segment stout, spoon-shaped; the central sheath rather broad, the apical portion subparallel but very slightly widened and spoon-shaped towards the end.

Length 7⅓–8 millim.; breadth 2½–3 millim. (♂ ♀.)

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet, Quiche Mountains 8000 feet (*Champion*).

Eight examples.

HYMENORUS.

Hymenophorus, Mulsant, Mém. Acad. Lyon, 1851, i. p. 201; Opusc. Ent. i. p. 68 (1852).

Hymenorus, Mulsant, loc. cit. p. 201; loc. cit. p. 188; Hist. Nat. Col. de France, Pectinipèdes, p. 33 (1856); Leconte, New Sp. Col. p. 137 (1866).

The numerous species here referred to this genus are connected together by various intermediate forms. The larger and more elongate members, such as *H. occidentalis*, *H. tarsalis*, &c., seem to connect *Allecula* and *Hymenorus*; but with the long series of species before me they are clearly much more closely allied to the latter. In *Allecula* there is a greater disparity between the width of the thorax and elytra (in *Hymenorus* the thorax is broader behind and forms a more continuous outline with the elytra, and consequently the general shape is more ovate), and the antennæ are comparatively longer, more slender, and more filiform. The apical joint of the maxillary palpi in several of the larger species (*H. occidentalis*, *H. sordidus*, *H. laticollis*, &c.) is very broad (with the apical side rather longer than the outer side), and formed almost as in *Allecula*, in others more triangular, and with the apical and outer sides about equal in length; in a few of the smaller species (*H. punctatissimus* &c.) the inner apical angle is more rounded. The third and fourth joints of the anterior and intermediate tarsi and the penultimate joint of the posterior tarsi are more or less lobed beneath, often more broadly so (*H. tarsalis* &c.) in the male. The first joint of the hind tarsi is in some species longer than the following three joints united.

Good sexual characters exist in many of the species in the larger size and greater approximation of the eyes, and in the shape of the tibiæ, in the male; and in discriminating the numerous closely allied forms it is often necessary to ascertain the sex of the specimens examined. The eyes vary greatly in size in the different

species: in some they are very large (especially in the male), and in others small and widely separated in both sexes. The third and fourth joints of the antennæ are about equal in length, the third being rarely (*H. tibialis*) a little shorter than the fourth. With one exception (*H. pini*), the whole of the Central-American species have the surface of the thorax more or less densely punctured; in the majority of those inhabiting the United States the thorax is more sparsely punctured, and in consequence more shining.

The head-quarters of *Hymenorus* in the New World would appear to be in Mexico, the genus extending northwards to the Middle United States, and southwards to Nicaragua. In the State of Panama I did not obtain a single representative. Eleven species (nine of which have been kindly communicated to me by Dr. Horn) have been described from the United States, and two or three are known from Europe or Asia Minor, and others, as yet unnamed, exist in collections; two of the North-American forms are stated to be of myrmecophilous habits.

1. **Hymenorus occidentalis.** (Tab. XIX. figg. 17, 17 *a*, ♂.)

Elongate, obscure reddish-brown or brownish-piceous, scarcely shining, thickly clothed with short pubescence. Head very closely and finely punctured; eyes large, rather narrowly separated in the male, a little more distant in the female; antennæ stout, rather short in both sexes, ferruginous; prothorax large, convex, broader than long, the sides much rounded anteriorly though nearly straight behind, the hind angles rather obtuse, the disc transversely flattened before the base, the basal foveæ shallow or indistinct, the surface very densely and rather finely punctured; scutellum closely punctured; elytra long, a little wider than the prothorax, subparallel in their basal half, with rows of fine oblong punctures placed upon very shallow striæ, the interstices almost flat, and very closely, finely, and confusedly punctured; beneath more shining, closely and finely punctured, the sides of the metasternum much more coarsely so, the middle of the metasternum in the male exceedingly closely and minutely punctured and very thickly pubescent; legs stout, reddish-testaceous or ferruginous.

♂. Anterior tibiæ slightly sinuous within. The lateral lobes of the last ventral segment narrow, moderately curved, bluntly rounded at the apex, and roughened and hairy beneath; the central sheath narrowing to the apex, the apex blunt. (Fig. 17 *a* *.)

Length 9–11¼ millim.; breadth 3¼–3⅔ millim. (♂ ♀.)

Hab. North America, Texas (*coll. F. Bates*).—Mexico (*Sallé, ex coll. Sturm*), Cordova, Guanajuato (*Sallé*).

Three specimens only from Mexico, several from Texas; one of the former (very immature) is labelled *Allecula brunnea*, Sturm, in the Sallé collection. Texan examples in Mr. F. Bates's collection are labelled *Allecula*, nov. sp., apud Horn. This species has the thorax rather large, much rounded at the sides, and very densely punctured; the elytra finely punctate-striate, and with the interstices very closely punctured; the legs comparatively stout; and the last joint of the maxillary palpi very broad, with its apical side longer than the outer side.

* The figure given is not quite correct: the pieces on either side of the base of the central sheath are not separated from the segment as they should be.

2. **Hymenorus brevicornis.** (Tab. XIX. fig. 18.)

Elongate, narrow, subparallel, brownish-piceous, scarcely shining, thickly clothed with short pubescence. Head somewhat closely and finely punctured; eyes moderate in size in both sexes, rather narrowly separated; antennæ short and rather stout, stouter in the female, only reaching to about the first fourth of the elytra in either sex, reddish-testaceous; prothorax convex, strongly transverse, the sides much rounded anteriorly but straight behind, the hind angles obtuse, the disc feebly impressed in the middle before the base, the basal foveæ almost obsolete, the surface very densely and finely punctured; scutellum closely punctured; elytra long, a little wider than the prothorax, subparallel to beyond the middle, with rows of fine oblong punctures placed upon very shallow striæ, the interstices almost flat and very closely, finely, and confusedly punctured; beneath and the legs as in *H. occidentalis*.

♂. Anterior tibiæ slightly widened on the inner side from a little before the middle. The lateral lobes of the last ventral segment long and thin, rather broad, somewhat spoon-shaped, rounded at the apex, and very slightly hairy beneath; the central sheath narrowing to the apex, the apex blunt. (Fig. 18.)

Length 9–9½ millim.; breadth 3–3¼ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), near the city, Jalapa (*Höge*).

Three examples only. This species is closely allied to *H. occidentalis*, but differs in its narrower and more parallel shape, less dull surface, more transverse thorax, rather longer elytra, and different male characters.

3. **Hymenorus durangoensis.**

Elongate, brownish-piceous, opaque, sparsely pubescent. Head somewhat closely and finely punctured; eyes (♀) large, widely separated; antennæ (♀) long and rather slender, ferruginous; prothorax transverse, feebly convex, a little depressed on the disc behind, the sides almost straight towards the base and somewhat obliquely converging in front, the hind angles obtuse, the basal foveæ almost obsolete, the surface very finely, shallowly, and closely punctured, the punctures a little more scattered on the basal half of the disc; scutellum closely punctured; elytra long, a little wider than the prothorax, subparallel in their basal half, with rows of fine punctures placed upon obsolete striæ, the interstices flat and each with about three rows of very fine not very closely placed punctures; beneath closely and finely punctured; legs obscure testaceous, rather long and slender.

Length 9¼–9½ millim.; breadth 3¼ millim. (♀.)

Hab. Mexico, Ciudad in Durango (*Höge*).

Two immature female examples. *H. durangoensis* is easily distinguished from *H. occidentalis* and *H. brevicornis* by its opaque surface, long antennæ, less convex and more sparsely punctured thorax, and by the punctures of the elytral interstices being placed in rows.

4. **Hymenorus tarsalis.** (Tab. XIX. fig. 19.)

Elongate, piceous-brown, sometimes lighter in tint, slightly shining, thickly pubescent. Head very closely and somewhat coarsely punctured; eyes rather small, equally and somewhat widely separated in both sexes; antennæ rather slender, moderately long in the male, much shorter in the female, ferruginous, joints 3–6 often stained with piceous; prothorax broader than long, moderately convex, the sides converging from the base, and a little rounded in front, the hind angles rather obtuse, the disc obsoletely canaliculate, and transversely impressed in the middle behind, the basal foveæ usually distinct, the surface densely and finely punctured; scutellum closely punctured; elytra moderately long, slightly wider than the prothorax, subparallel in the male, a little wider posteriorly in the female, finely but rather deeply punctate-striate, the interstices almost flat, and thickly and confusedly punctured; beneath closely punctured; legs moderately long, more or less ferruginous (the tibiæ sometimes a little darker), in the male much stouter than in the female and with the tarsal lobes much more broadly dilated.

♂. Anterior tibiæ simple. The lateral lobes of the last ventral segment rather long, thin, broad, and spoon-shaped, broadly rounded at the apex; the central sheath rather broad, gradually narrowing, the apical portion long and elongate-triangular in shape, the apex blunt. (Fig. 19.)

Length 8–8⅓ millim.; breadth 2½–2⅔ millim. (♂ ♀.)

Hab. GUATEMALA, Calderas 6000 feet, Capetillo (*Champion*).

Numerous examples. In the male of this insect the legs are very stout, and the tarsal lobes are more broadly dilated than in the female. *H. tarsalis* is closely allied to *H. oculatus*, though differing greatly in the size of the eyes and in the tarsal structure in the male; in the last-named sex of *H. oculatus* the legs are not stouter and the tarsi not more broadly lobed than in the female of *H. tarsalis*. This insect inhabits the slopes of the Volcan de Fuego, and was obtained by beating the lower branches of trees.

5. **Hymenorus oculatus.** (Tab. XIX. figg. 20, 20 *a*, ♂.)

Elongate, subparallel, brownish-black, slightly shining, thickly pubescent. Head closely and finely punctured; eyes (♂) very large, very narrowly separated; antennæ (♂) long, about reaching to the middle of the elytra, the joints somewhat strongly widened towards their apex, fusco-ferruginous, the two basal joints lighter; prothorax rather convex, broader than long, the sides gradually converging from the base to about the middle and then rounded and more rapidly narrowing to the apex, the hind angles rather obtuse, the basal foveæ indistinct, the disc slightly depressed in the middle before the base, the surface densely and finely punctured; scutellum closely punctured; elytra moderately long, a little wider than the prothorax, subparallel to beyond the middle, finely punctate-striate, the interstices almost flat and finely and rather closely punctured; beneath more shining, finely and rather closely punctured; legs long and rather slender, ferruginous, the tibiæ darker.

♂. Anterior tibiæ simple. The lateral lobes of the last ventral segment broad and thin, spoon-shaped, and broadly rounded at the apex; the central sheath with its apical portion long, parallel towards the end, the apex bluntly rounded. (Fig. 20 *a*.)

Length 6½–9⅓ millim.; breadth 2¼–2⅔ millim. (♂.)

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, San Lucas (*Champion*).

Two male examples. This insect may be identified by its elongate, subparallel shape, very large and approximate eyes, &c. The Guatemalan example is very much larger, and has the elytra longer than the Mexican one, but otherwise agrees well with it. *H. oculatus* much resembles the genus *Dircæa*.

The Guatemalan specimen was found by the side of the main road on the summit of the ridge between the city of Guatemala and Antigua, beneath loose bark, at an elevation of 6400 feet.

6. **Hymenorus sordidus.** (Tab. XIX. fig. 22.)

Elongate, reddish- or piceous-brown, slightly shining, thickly pubescent. Head very closely and rather coarsely punctured; eyes (♂) very large, narrowly separated; antennæ (♂) moderately long, rather stout, entirely ferruginous; prothorax convex, broader than long, the sides almost straight behind, or very gradually and obliquely converging from the base to the middle, and rounded and rapidly narrowing in front, the hind angles subrectangular, the disc obsoletely canaliculate behind, and shallowly transversely impressed in the middle before the base, the basal foveæ indistinct, the surface densely and finely punctured; scutellum closely punctured; elytra moderately long, a little wider than the prothorax, subparallel in

their basal half, finely and rather deeply punctate-striate, the interstices slightly convex and closely and confusedly punctured; beneath more shining, closely and somewhat coarsely punctured; legs moderately stout, more or less ferruginous, the tibiæ a little darker; anterior and intermediate tarsi with the third and fourth joints, and the posterior tarsi with the penultimate joint, feebly lobed beneath.

♂. Anterior tibiæ simple. The lateral lobes of the last ventral segment broad and spoon-shaped, very broadly rounded and slightly setose at the apex; the central sheath narrow, the apical portion long, the apex blunt. (Fig. 22.)

Length $7\frac{1}{2}$–$7\frac{2}{3}$ millim.; breadth $2\frac{1}{2}$ millim. (♂.)

Hab. Mexico, Cordova (*Sallé*); Guatemala, Capetillo (*Champion*).

Seven examples, apparently all males. In the size and approximation of the eyes in the male this species is intermediate between *H. oculatus* and *H. tarsalis*; from the corresponding sex of the former it differs in the shorter, stouter, and entirely ferruginous antennæ, less approximate eyes, &c.; and from the latter in the feebly dilated tarsi and the larger eyes in the male, shorter elytra, &c.

The specimens vary a little in the shape of the thorax, one or two having the sides rather more parallel before the base.

7. **Hymenorus pini.** (Tab. XIX. fig. 21, ♂.)

Moderately elongate, rather depressed, brownish-black, shining, sparsely pubescent. Head closely and finely punctured, the vertex rather more coarsely so; eyes (♂) small and widely separated; antennæ (♂) rather short, moderately stout, ferruginous; prothorax transverse, slightly convex, the sides very gradually converging from the base to about the middle and then rounded, and more rapidly narrowing to the apex, the hind angles obtuse, the basal foveæ shallow, the disc a little flattened before the base, the surface finely and somewhat closely punctured; scutellum closely punctured; elytra moderately long, distinctly wider than the prothorax, the sides almost straight though gradually widening to beyond the middle, depressed on the disc, with rows of fine oblong punctures placed upon shallow striæ, the interstices flat and each with about two rows of very fine punctures; beneath finely and rather closely punctured; legs long and slender, ferruginous, the third and fourth joints of the anterior and intermediate tarsi and the penultimate joint of the posterior tarsi feebly lobed beneath.

♂. Anterior tibiæ simple. The lateral lobes of the last ventral segment very short and broad, consisting only of a triangular extension of the segment on each side; the central sheath with its apical portion very long, the apex blunt and slightly curved downwards.

Length $7\frac{1}{2}$–$8\frac{1}{2}$ millim.; breadth $2\frac{1}{2}$–3 millim. (♂.)

Hab. Guatemala, Totonicapam 10,000 feet, Quiche Mountains 8500 feet (*Champion*).

Three examples, all males. This species differs from all others of the genus here described in the more sparsely punctured surface of the thorax. *H. pini* inhabits the pine-forest region of Los Altos, Guatemala.

8. **Hymenorus canaliculatus.**

Elongate, narrow, rather depressed, reddish-brown, the prothorax slightly suffused with piceous, opaque, thickly pubescent. Head very closely and somewhat coarsely punctured; eyes moderately large, widely separated; antennæ rather stout, moderately long; prothorax transverse, rather depressed, the sides straight behind and very gradually narrowing and rounded in front, the hind angles subrectangular, the disc impressed in the middle before the base, and very distinctly canaliculate, the basal foveæ indistinct, the surface finely and very densely punctured; scutellum closely punctured; elytra long, subparallel to beyond the middle, a little wider than the prothorax, finely and shallowly punctate-striate, the interstices

almost flat and closely, shallowly, and confusedly punctured; beneath closely punctured; legs slender, ferruginous.

Length 8 millim.; breadth $2\frac{2}{3}$ millim.

Hab. Mexico, Cordova (*Sallé*).

One specimen only, apparently of the female sex. Duller and more depressed than *H. sordidus*; the thorax less convex and distinctly canaliculate; the elytra relatively longer, with shallower striæ and more finely punctured interstices; the eyes widely separated, &c.

9. **Hymenorus flohri.** (Tab. XIX. fig. 23.)

Moderately elongate, rather depressed, dull brownish-piceous, the elytra slightly shining, thickly pubescent. Head very closely and finely punctured; eyes rather small, not very widely separated in the male, more distant in the female; antennæ rather short in both sexes, moderately stout, ferruginous; prothorax strongly transverse, rather depressed, the sides a little rounded and converging from the base, the hind angles subrectangular, the disc canaliculate at the extreme base, the basal foveæ obsolete, the surface finely and very densely punctured; scutellum closely punctured; elytra moderately long, rather wider than the prothorax, subparallel in their basal half, finely and deeply punctate-striate, the interstices very feebly convex and finely and thickly punctured; legs slender, moderately long, ferruginous or fusco-ferruginous; anterior and intermediate tarsi with the third and fourth joints, and the posterior tarsi with the penultimate joint, very feebly lobed beneath.

Length $7\frac{1}{3}$–8 millim.; breadth $2\frac{2}{3}$–$3\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, near the city, Yautepec in Morelos (*Höge*).

Two examples.

10. **Hymenorus laticollis.**

Moderately elongate, rather depressed, brownish-piceous, slightly shining, thickly pubescent. Head very closely and coarsely punctured; eyes (♂) small, widely separated; antennæ (♂) moderately long, rather slender, ferruginous; prothorax large and broad, transverse, the sides expanded and much rounded anteriorly and almost straight behind, the hind angles obtuse, the lateral margins thin and prominent, the basal foveæ indistinct, the surface very densely and finely punctured, the disc unimpressed but with traces of a smooth central line; scutellum closely punctured; elytra moderately long, a little wider than the prothorax, subparallel in their basal half, with rows of fine oblong punctures placed upon very shallow striæ, the interstices flat and closely, confusedly, and not very finely punctured; legs slender, rather long, ferruginous.

Length $7\frac{1}{4}$ millim.; breadth 3 millim. (♂.)

Hab. Mexico (*coll. F. Bates*).

A single male example. This insect is closely allied to *H. flohri*, but differs from it in the more coarsely punctured head, more widely separated eyes in the male, larger and more expanded thorax, more lightly impressed elytral striæ, less finely punctured interstices, longer legs, and more distinctly lobed tarsi. Labelled *Allecula laticollis*, Dej., in Mr. F. Bates's collection.

11. **Hymenorus grandicollis.**

Elongate ovate, brownish-black, opaque, thickly pubescent. Head closely and rather coarsely punctured; eyes (♂) large, narrowly separated; antennæ (♂) moderately long and stout, ferruginous; prothorax

large, convex, broader than long, the sides rounded and gradually converging from a little before the base, the hind angles subrectangular, the basal foveæ scarcely indicated, the disc unimpressed, the surface finely and very densely punctured; scutellum closely punctured; elytra moderately long, a little wider than the prothorax, subparallel in their basal half, with rows of fine punctures placed upon shallow striæ, the interstices almost flat and very shallowly, finely, and thickly punctured; legs ferruginous; beneath very closely punctured.

Length $7\frac{1}{2}$ millim.; breadth $2\frac{3}{4}$ millim.

Hab. North America, Arizona.—Mexico, Northern Sonora (*Morrison*).

Two examples, apparently both males. This insect somewhat resembles *H. punctatissimus* and *H. segnis*; but differs from both in its much larger size, less transverse thorax, longer and stouter limbs, &c., and also from the latter by its more finely punctate-striate elytra; in its general shape and large eyes it approaches *H. occidentalis* &c. The Arizona example has been kindly lent to me for examination by Dr. Horn.

12. **Hymenorus segnis.**

Elongate, piceous-brown, opaque, densely clothed with short pubescence. Head closely and somewhat coarsely punctured; eyes (♀) rather small, somewhat widely separated; antennæ (♀) rather short, the joints stout and short, ferruginous; prothorax transverse, rather convex, the sides rounded and narrowing from a little before the base, the hind angles rectangular, the base feebly bisinuate, the basal foveæ indistinctly indicated, the surface very densely and finely punctured; scutellum closely punctured; elytra long, scarcely wider than the prothorax, subparallel in their basal half, shallowly and finely punctate-striate, the punctures closely placed, the interstices almost flat and very finely and closely punctured; beneath very closely punctured; legs rather slender, ferruginous.

Length $6\frac{1}{3}$–$6\frac{3}{4}$ millim.; breadth $2\frac{1}{2}$ millim. (♀.)

Hab. Mexico, Acapulco (*Höge*).

Three examples only. This species somewhat resembles *H. grandicollis*, but differs from it in its much smaller, less convex, and widely separated eyes, shorter and stouter antennæ, much more closely and deeply punctured elytral striæ, more slender legs, smaller size, &c. From *H. confertus*, Lec., it may be identified by its larger size, more elongate shape, more finely punctured elytral interstices, less filiform antennæ, &c.

13. **Hymenorus tibialis.** (Tab. XIX. figg. 24, 24 *a*, ♂.)

Elongate ovate, dull brownish-piceous, the suture a little lighter, the elytra slightly shining, thickly and coarsely pubescent. Head closely and rather coarsely punctured; eyes very large, approximate in the male, very narrowly separated in the female; antennæ rather short and stout in both sexes, the third joint a little shorter than the fourth, ferruginous; prothorax convex, transverse, the sides rounded and converging almost from the base, the hind angles rectangular, the base strongly bisinuate, the disc obsoletely canaliculate and shallowly depressed behind, the basal foveæ very small or indistinct, the surface finely and very densely punctured; scutellum closely punctured; elytra scarcely wider than the prothorax, rather short, subparallel towards the base, finely and rather deeply punctate-striate, the punctures very closely placed, the interstices feebly convex and thickly punctured; legs rather short, more or less ferruginous, the first joint of the posterior tarsi longer than the following joints united.

♂. Posterior tibiæ strongly sinuate within. The lateral lobes of the last ventral segment broad and stout, abruptly bent inwards towards the apex, and with the apices very sharply and acuminately extended towards each other; the central sheath narrow, the apical portion triangular in shape. (Fig. 24 *a*.)

Length $5\frac{1}{3}$–$6\frac{1}{2}$ millim.; breadth 2–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. GUATEMALA, Capetillo (*Champion*).

Seven examples. A species easily recognized on account of the very large and approximate eyes and the sinuous posterior tibiæ in the male. *H. tibialis* in its large eyes resembles *H. oculatus*, but is much smaller and much less elongate, and also differs in its shorter legs and antennæ; it has the third joint of the antennæ slightly shorter than the fourth in both sexes.

14. **Hymenorus hispidulus.** (Tab. XX. fig. 1.)

Oblong ovate, brownish-piceous, slightly shining, thickly clothed with long coarse pubescence. Head coarsely and sparsely punctured, the epistoma smoother; eyes very large, approximate in the male, narrowly separated in the female; antennæ stout, rather short, the joints very little widened towards their apex, ferruginous; prothorax transverse, rather convex, the sides rounded and narrowing in front and straight behind, the hind angles sharply rectangular, the base strongly bisinuate, the basal foveæ indistinctly indicated, the disc unimpressed, the surface densely and somewhat coarsely punctured; scutellum closely punctured; elytra moderately long, very distinctly wider than the prothorax at the base, rather coarsely punctate-striate, the interstices feebly convex, flatter on the disc, and sparsely and somewhat coarsely punctured; beneath sparsely punctured; legs rather stout, ferruginous, the first joint of the hind tarsi longer than the following joints united.

♂. Posterior tibiæ feebly sinuate within. Fifth ventral segment shallowly foveolate in the middle. The lateral lobes of the last ventral segment narrowly separated, parallel, very long and slender, curved a little downwards, and almost pointed; the central sheath at the extreme apex a little widened and somewhat broadly rounded. (Fig. 1.)

Length 6–6⅔ millim.; breadth 2⅓–2⅔ millim. (♂ ♀.)

Hab. MEXICO, Cordova (*Sallé*), Jalapa (*Höge*).

Four examples. This insect is distinguished from its allies by the long and coarse pubescence of the upper surface. It is allied to *H. foveiventris* (the male characters being somewhat similar), but is broader, and has larger and more approximate eyes in the male, much coarser pubescence, stouter legs, and the posterior tibiæ undilated within in the male. Worn examples of the female are difficult to distinguish from the corresponding sex of *H. tibialis*; the thorax, however, is more finely and still more densely punctured and relatively broader in *H. tibialis*; the males differ considerably.

15. **Hymenorus forreri.**

Oblong ovate, dull reddish-brown, suffused above with piceous, the elytra slightly shining, thickly clothed with long, coarse pubescence. Head sparsely and rather finely punctured; eyes (♂) very large and approximate; antennæ stout, rather short, ferruginous; prothorax transverse, convex, broad, the sides very strongly rounded and converging from a little before the base, the hind angles subrectangular, the base rather strongly bisinuate, the surface very densely and somewhat coarsely punctured; elytra moderately long, as wide as the prothorax at the base, coarsely and deeply punctate-striate, the interstices rather convex and sparsely and somewhat coarsely punctured; beneath reddish, shining, the ventral surface sparsely and finely, the metasternum coarsely and more closely, punctured; legs rather stout, ferruginous, the first joint of the hind tarsi longer than the following joints united.

Length 6 millim.; breadth 2½ millim. (♂.)

Hab. MEXICO, Ventanas in Durango (*Forrer*).

Closely allied to *H. hispidulus*; but differing from it in the less coarsely punctured vertex, the much broader thorax (the sides of which are very strongly rounded), and the more coarsely punctate-striate elytra, the latter not broader than the thorax at the base.

Though a single mutilated example only has been received, there can be no doubt that it represents a distinct species. *H. hispidulus* is from the Atlantic, *H. forreri* from the Pacific, slope.

16. **Hymenorus foveiventris.** (Tab. XX. figg. 2, 2 *a*.)

Oblong ovate, reddish-brown, slightly shining, densely clothed with short pubescence. Head rather closely punctured, the vertex coarsely, the epistoma more finely so; eyes large and narrowly separated in the male, smaller and much more distant in the female; antennæ moderately long, rather stout, ferruginous; prothorax transverse, rather convex, the sides rounded and narrowing from a little before the base and straight behind, the hind angles subrectangular, the base rather strongly bisinuate, the basal foveæ indistinctly indicated, the surface coarsely and densely punctured; scutellum closely punctured; elytra moderately long, a little wider than the prothorax at the base, coarsely punctate-striate, the interstices slightly convex and sparsely punctured; legs ferruginous, the four hinder tibiæ almost straight, the basal joint of the hind tarsi longer than the following three joints united.

♂. Posterior tibiæ straight, slightly dilated on the inner side behind the middle. Fifth ventral segment with a deep longitudinal fovea in the middle extending from the apical margin nearly to the base. The lateral lobes of the last ventral segment narrowly separated, long and very slender, and abruptly curved downwards; the central sheath (when viewed laterally) slightly widened at the extreme apex. (Figg. 2, 2 *a*.)

Length $4\frac{3}{4}$–$5\frac{1}{2}$ millim.; breadth 2 millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo (*Champion*).

Five examples, two of which are males. In general facies this insect resembles *H. sordidus*, but it differs from that species in its very much smaller size, shorter elytra, sparsely punctured interstices, smaller and less acutely triangular apical joint of the maxillary palpi, and male characters; in the sculpture of the elytra it approaches *H. guatemalensis*. The basal joint of the hind tarsi is very long.

A single female example from the same locality differs from the others in being larger, and in having the thorax relatively larger and broader and more rounded at the sides, and the elytral interstices more coarsely punctured; it is probably a variety of the same species.

17. **Hymenorus similis.** (Tab. XX. figg. 5, 5 *a*.)

Closely resembling *H. foveiventris*, and differing as follows:—Smaller and shorter; the eyes more approximate in both sexes; the prothorax more densely punctured and in consequence duller; the elytra relatively shorter; the fifth ventral segment unimpressed in the male; the legs more slender; the intermediate and posterior tibiæ slightly sinuate within.

♂. Posterior tibiæ slightly curved. The lateral lobes of the last ventral segment shaped much as in *H. foveiventris*, but more gradually curved downwards; the central sheath with its apical portion rather broad, somewhat spatulate in shape, and not widened at the extreme apex, the latter rounded. (Figg. 5, 5 *a*.)

Length 4–$4\frac{1}{2}$ millim.; breadth $1\frac{1}{2}$–$1\frac{3}{4}$ millim. (♂ ♀.)

Hab. Mexico, Ventanas in Durango, Cuernavaca (*Höge*).

A single male example from Ventanas and a female from Cuernavaca; they apparently represent the sexes of the same species.

18. **Hymenorus badius.** (Tab. XX. fig. 6.)

Oblong ovate, dull reddish-brown or obscure castaneous, the elytra slightly shining, thickly clothed with short pubescence. Head coarsely and rather closely punctured; eyes very large and approximate in the male, a little smaller and narrowly separated in the female; antennæ rather stout, moderately long, the joints not much widened towards their apex, ferruginous; prothorax transverse, moderately convex, the sides parallel behind and rounded and narrowing in front, the hind angles rectangular, the base strongly bisinuate, the surface very densely and coarsely punctured; scutellum closely punctured; elytra moderately long, a little wider than the prothorax at the base, coarsely punctate-striate, the interstices slightly convex and sparsely and rather coarsely punctured; legs stout, ferruginous, the first joint of the posterior tarsi longer than the following joints united; beneath shining, the ventral surface fine and rather sparsely, the sides of the metasternum coarsely, punctured.

♂. Posterior tibiæ slightly sinuate within. Fifth ventral segment broadly and shallowly depressed in the centre. Metasternum very closely and finely punctured and pubescent in the middle behind. The lateral lobes of the last ventral segment very long, narrowly separated, broad and subparallel within for two thirds of their length, then abruptly narrowed and with the slender apical portion curved a little inwards and pointed at the end; the central sheath broad, the apex a little widened and rather broadly rounded. (Fig. 6.)

Length $5\frac{1}{2}$ millim.; breadth $2\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*).

Four examples, two of which are males. This species is very closely allied to *H. foveiventris*: it differs in the eyes being larger and more approximate in both sexes (especially noticeable in the male), and in the more densely punctured and duller thorax, and the stouter legs; and also in the fifth ventral segment being unimpressed, the posterior tibiæ merely a little sinuous within, and the lateral lobes of the last ventral segment very differently shaped, in the male.

19. **Hymenorus rufescens.**

Oblong ovate, dull reddish-piceous, the elytra slightly shining, thickly clothed with short pubescence. Head finely and closely punctured in front, coarsely so on the vertex; eyes very large and approximate in the male, a little smaller and very narrowly separated in the female; antennæ ferruginous, rather long and stout, reaching to the first third of the elytra and with the joints distinctly widened towards their apex in the male, more filiform in the female; prothorax transverse, rather convex, the sides parallel behind and narrowing and rounded in front, the hind angles rectangular, the base strongly bisinuate, the basal foveæ very shallow but distinct, the lateral margins prominent and somewhat extended, the surface densely and rather coarsely punctured; scutellum closely punctured; elytra scarcely or very little wider than the prothorax at the base, moderately long, lightly and rather finely punctate-striate, the interstices almost flat and finely and somewhat closely punctured; legs ferruginous, the tibiæ almost straight, the first joint of the hind tarsi longer than the following joints united.

♂. Posterior tibiæ very slightly sinuate within. The lateral lobes of the last ventral segment rather stout, abruptly bent inwards towards the apex and with the apices acuminately extended towards each other; the central sheath narrow, the extreme apex widened out and somewhat spoon-shaped.

Length $5\frac{1}{2}$–$5\frac{3}{4}$ millim.; breadth 2–$2\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*), Temax in N. Yucatan (*Gaumer*).

Four examples. This species comes very close to *H. badius* and *H. foveiventris*, but it differs from both in the more finely and more lightly impressed elytral striæ and flatter

interstices; the head and eyes are formed as in *H. badius*, but the antennæ in the male are longer. The œdeagus also differs in structure from that of either of the first-mentioned species. From *H. hispidulus* the shorter pubescence, the more finely and more densely punctured and relatively broader thorax, and the differently shaped œdeagus sufficiently distinguish it. The lateral lobes of the last ventral segment are formed very much as in *H. tibialis*.

20. **Hymenorus igualensis.**

Closely resembling *H. rufescens*, and differing as follows:—Broader and more ovate, opaque, reddish-brown; the eyes very large and narrowly separated; the prothorax more densely punctured; the elytral interstices broader and flatter and more distinctly punctured; the legs stouter; the rest as in *H. rufescens*.

Length $5\frac{2}{3}$ millim.; breadth $2\frac{1}{3}$ millim. (♀.)

Hab. Mexico, Iguala in Guerrero (*Höge*).

A single example, undoubtedly distinct from *H. rufescens*.

21. **Hymenorus longicollis.** (Tab. XX. fig. 3, ♂.)

Elongate, narrow, reddish-brown, dull, thickly clothed with fulvous pubescence. Head closely and not very finely punctured; eyes (♂) large but rather narrow, narrowly separated; antennæ (♂) short and stout, ferruginous; prothorax elongate, only a little broader than long, convex, the sides parallel and almost straight from the base to beyond the middle and rounded and but very little narrowed in front, the hind angles rectangular, the base rather strongly bisinuate, the surface unimpressed and densely and somewhat coarsely punctured; scutellum closely punctured; elytra long, very little wider than the prothorax, lightly punctate-striate, the punctures oblong in shape and not very closely placed, the interstices almost flat, closely punctured on the basal half and sparsely so beyond; legs short, ferruginous; the first joint of the hind tarsi rather short, about as long as the following joints united.

Length $5\frac{1}{2}$ millim.; breadth 2 millim. (♂.)

Hab. Mexico, Vera Cruz (*Höge*).

A single male example. This insect may be readily identified by its elongate, narrow shape and comparatively very long thorax.

22. **Hymenorus castaneus.**

Elongate ovate, rather narrow, dull castaneous, the elytra slightly shining, thickly clothed with short pubescence. Head closely and rather finely punctured; eyes (♂) large, rather narrowly separated; antennæ (♂) stout, moderately long, ferruginous; prothorax broader than long, convex, the sides parallel behind and rounded and narrowing in front, the hind angles rectangular, the base rather strongly bisinuate, the surface very densely and somewhat coarsely punctured; scutellum closely punctured; elytra moderately long, a little wider than the prothorax at the base, subparallel in their basal half, finely and shallowly punctate-striate, the punctures oblong in shape and approximate, the interstices almost flat and closely punctured; legs ferruginous, short, and rather stout, the four hinder tibiæ straight; beneath closely and coarsely, the ventral surface more sparsely, punctured.

Length $5\frac{1}{2}$ millim.; breadth $2\frac{1}{4}$ millim. (♂.)

Hab. Mexico, Ventanas in Durango (*Höge*).

A single male example. In its general shape this species is intermediate between *H. igualensis* and *H. longicollis*, though perfectly distinct from either.

23. **Hymenorus depressus.**

Elongate, depressed, pitchy-testaceous, dull, thickly clothed with short pubescence. Head closely and not very finely punctured; eyes large, narrowly separated; antennæ short, the joints not much widened towards their apex, testaceous; prothorax broader than long, the sides almost straight behind and broadly rounded and narrowing in front, the hind angles subrectangular, the disc slightly depressed in the middle behind, the base feebly bisinuate, the surface finely and very densely punctured; elytra long, a little wider than the prothorax at the base, subparallel in their basal half, shallowly and rather finely punctate-striate, the punctures oblong in shape, the interstices finely and closely punctured; legs slender, the first joint of the hind tarsi longer than the following joints united; beneath sparsely punctured.

Length $5\frac{1}{4}$ millim.; breadth 2 millim.

Hab. Mexico, Chilpancingo in Guerrero (*Höge*).

A single example, apparently a female. This insect very closely resembles the Californian *H. confertus*, Lec.; but may be at once distinguished from it by the larger and narrowly separated eyes (in *H. confertus* the eyes are widely separated, even in the male), and the less approximate and coarser punctures of the elytral striæ.

24. **Hymenorus colonoides.** (Tab. XX. fig. 4.)

Oblong ovate, rather convex, piceous-brown, opaque, densely pubescent. Head closely and coarsely punctured, the anterior half and the oral organs ferruginous; eyes moderately large, transverse, about equally and not very widely separated in either sex; antennæ short and stout in both sexes, ferruginous; prothorax broad, transverse, convex, the sides much rounded and converging from a little before the base, the base strongly bisinuate (the median lobe in consequence well defined), the hind angles subrectangular, the surface very densely and rugulosely punctured and almost unimpressed; scutellum very closely punctured; elytra moderately long, the width of the prothorax at the base (the sides forming almost a continuous outline with the prothorax), with rows of oblong moderately coarse punctures placed upon rather shallow striæ, the interstices almost flat and finely and closely punctured; legs short, ferruginous, the four hinder tibiæ straight and similar in both sexes, the first joint of the hind tarsi not longer than the following joints united.

Length $4\frac{3}{4}$–$5\frac{1}{2}$ millim.; breadth 2–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico, Guanajuato (*Sallé*), Atlixco, Matamoros Izucar, Jalapa (*Höge*); Guatemala, Dueñas (*Champion*).

Numerous examples. Compared with *H. americanus* this species is easily distinguished by the eyes being larger, more transverse, and less widely separated in both sexes; the thorax broader, as wide at the base as the elytra, the surface more densely and more coarsely punctured, and the base strongly bisinuate; the elytral striæ more finely and more closely punctured, and the interstices rather flatter. This insect has much the facies of a species of *Colon*.

25. **Hymenorus brevipes.** (Tab. XX. fig. 7, ♂.)

Closely resembling *H. colonoides*, and differing as follows:—Shorter and rather more convex; the eyes (♂) smaller and much more widely separated; the antennæ (♂) much shorter, with the joints more widened towards their apex; the prothorax shorter and broader, more strongly transverse, still more rounded at the sides, the base strongly bisinuate and with the median lobe very prominent, the surface not quite

so densely punctured; the elytra relatively shorter, the striæ more deeply impressed, the interstices closely punctured; the legs stouter and much shorter; the rest much as in *H. colonoides*.

Length $4\frac{1}{2}$ millim.; breadth 2 millim. (♂.)

Hab. MEXICO, Iguala in Guerrero (*Höge*).

Though we have only a single example of this insect there can be no doubt of its specific distinctness.

26. Hymenorus torridus.

Nearly allied to *H. colonoides*, and differing as follows:—Rather more convex; the eyes much larger and much more approximate than in the male of *H. colonoides*; the antennæ much longer, with the joints more elongate; the prothorax similarly shaped and sculptured, the base very strongly bisinuate; the elytra more coarsely and deeply punctate-striate, the interstices closely and not so finely punctured; the first joint of the hind tarsi more elongate, longer than the following joints united.

Length $5\frac{2}{3}$ millim.; breadth $2\frac{1}{3}$ millim.

Hab. MEXICO, Acapulco (*Höge*).

One example, apparently a female.

27. Hymenorus angustatus.

Oblong ovate, rather narrow, brownish-piceous, subopaque, thickly clothed with short pubescence. Head closely and rather coarsely punctured, the anterior half and the oral organs ferruginous; eyes moderately large, equally and somewhat widely separated in both sexes: antennæ rather stout, the joints considerably thickened towards their apex and moderately long, piceo-ferruginous, the two basal joints lighter; prothorax transverse, rather convex, the sides much rounded though parallel towards the base, the basal foveæ indistinctly indicated, the hind angles rectangular, the base strongly bisinuate, the surface very densely and finely punctured; scutellum closely punctured; elytra rather long, subparallel in their basal half, the width of the prothorax at the base, finely and lightly punctate-striate, the punctures closely placed, the interstices flat and very closely and finely punctured; legs short, ferruginous, the tibiæ a little darker, the first joint of the hind tarsi the length of the following joints united.

Length $5\frac{1}{2}$–6 millim.; breadth 2–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, San Gerónimo (*Champion*).

Four examples. Narrower, duller, and more parallel than *H. emmenastoides*; the eyes larger and more narrowly separated in both sexes; the sides of the thorax straighter behind, the surface still more densely and more finely punctured; the elytral striæ more lightly impressed and more finely punctured. From *H. colonoides*, to which it is much more closely allied, it may be distinguished by its longer and more parallel elytra, and longer antennæ and legs; the head and eyes are formed much as in *H. colonoides*, but the latter are more widely separated.

28. Hymenorus emmenastoides.

Oblong ovate, brownish-piceous, slightly shining, thickly clothed with short pubescence. Head closely and somewhat coarsely punctured, the vertex more coarsely so, the anterior half and the oral organs ferruginous; eyes small and widely and equally separated in both sexes; antennæ short in both sexes, rather slender, ferruginous; prothorax transverse, rather convex, the sides rounded and converging from the base, the hind angles subrectangular, the base strongly bisinuate, the basal foveæ feebly indicated, the surface

densely and not very finely punctured; scutellum closely punctured; elytra moderately long, the width of or very little wider than the prothorax at the base, with rows of moderately coarse punctures placed upon shallow striæ, the punctures closely placed, the interstices almost flat or very feebly convex and finely and rather closely punctured; legs short and rather slender, ferruginous.

Length $5\frac{1}{2}$–$6\frac{1}{2}$ millim.; breadth 2–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Ostuncalco 7500 feet, Calderas, slopes of the Volcan de Fuego above Capetillo (*Champion*).

Many examples. This insect is not uncommon in the Los Altos region of Guatemala; it is distinguished from the preceding species by its small eyes, slightly shining surface, and by the sides of the thorax converging from the base. Two examples only have been received from Mexico. As in several of the allied species the sexes are scarcely distinguishable by external characters.

29. Hymenorus punctatissimus.

Hymenorus punctatissimus, Lec. New Sp. Col. p. 138 (1866) [1].

Hab. NORTH AMERICA, Arizona [1].—MEXICO, Northern Sonora (*Morrison*).

From the late Mr. Morrison we have received three perfectly distinct species under the above name. One of these, represented by two male examples, is undoubtedly *H. punctatissimus*; the other two are here described under the names of *H. ruficollis* and *H. deplanatus*. The two examples mentioned have the thorax exceedingly densely and finely punctured; and the elytra with very shallow and very finely punctured striæ, the interstices very closely and finely punctured, the punctures very little coarser than those of the striæ.

30. Hymenorus maritimus.

Oblong, piceous with a slight bronzy tinge, the prothorax sometimes very narrowly and indistinctly ferruginous at the sides and base, the head ferruginous in front, slightly shining, thickly clothed with long ashy pubescence. Head somewhat coarsely and closely punctured; eyes rather small, somewhat widely separated; antennæ short and stout in both sexes, the joints short and thickened towards their apex, brownish-black, the two basal joints ferruginous; prothorax broader than long, the sides rounded and converging anteriorly and almost straight behind, the base feebly bisinuate, the hind angles rectangular, the disc obsoletely canaliculate behind, the surface densely and not very finely punctured; scutellum closely punctured: elytra rather short, about as wide as the prothorax, subparallel in their basal half, shallowly and rather finely punctate-striate, the interstices finely and closely punctured; legs short, ferruginous, the tibiæ sometimes a little darker; apical joint of the maxillary palpi brownish-black.

Length $4\frac{1}{3}$–$4\frac{1}{2}$ millim.; breadth $1\frac{3}{4}$ millim. (♂ ♀.)

Hab. GUATEMALA, Champerico (*Champion*).

Four examples of this distinct insect were captured by myself on the Pacific coast at Champerico. *H. maritimus* is one of the smallest of the Central-American species, and may be recognized by its narrow and somewhat parallel shape, rather short elytra, and slight bronzy tint.

31. **Hymenorus americanus.**

Oblong ovate, brownish-piceous or obscure reddish-brown, the prothorax usually of a more reddish tint and subopaque, the elytra a little more shining, thickly clothed with short pubescence. Head closely and coarsely punctured, the vertex still more coarsely so; eyes small and widely separated in both sexes; antennæ short and stout, the joints short and very distinctly widening towards their apex, ferruginous; prothorax transverse, rather convex, the sides straight behind and rounded and narrowing in front, the hind angles rectangular, the basal foveæ indistinctly indicated, the base rather strongly bisinuate, the surface densely and finely punctured; scutellum closely punctured; elytra a little wider than the prothorax at the base, rather short, finely and shallowly punctate-striate, the interstices almost flat and closely punctured; legs short, ferruginous, the first joint of the hind tarsi rather shorter than the following joints united.

♂. Fifth ventral segment shallowly foveolate in the middle.

Length $4\frac{1}{3}$–$5\frac{2}{3}$ millim.; breadth $1\frac{3}{4}$–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico (*coll. F. Bates*), Colima city, Chilpancingo, Jalapa (*Höge*); Guatemala, Rio Naranjo, Zapote (*Champion*); Nicaragua, Granada (*Sallé*).

This is one of a group of numerous species inhabiting the southern United States, Mexico, Guatemala, and Nicaragua, but not known to me from further south. Three only (*H. confertus*, *H. densus*, and *H. punctatissimus*, Lec., all from the southern United States) have been hitherto described. From *H. densus* the present species may be separated by its broader and more transverse thorax (the sides of which are more rounded) and entirely ferruginous antennæ; from *H. confertus* (a Californian male example of which, determined by Leconte himself, is before me) by its shorter and stouter antennæ (the joints of which are more serrate in shape), more coarsely punctured vertex, shorter and rather more coarsely punctate-striate elytra, and more ovate shape; and from *H. punctatissimus* by the more coarsely punctured thorax. The single example in Mr. F. Bates's collection is labelled *H. confertus*, Lec. Guatemalan examples have the vertex still more coarsely punctured, but intermediate forms occur. All these species have small and widely separated eyes in both sexes, a densely punctured thorax, finely punctate-striate elytra (the interstices of which are almost flat and closely punctured), and a subopaque surface.

32. **Hymenorus densus.**

Hymenorus densus, Lec. New Sp. Col. p. 138 (1866) [1].

Hab. North America, Florida [1], Texas.—Mexico, Vera Cruz (*Sallé*).

A single example from Vera Cruz in the Sallé collection agrees well with others from Texas and Florida. This species may be distinguished from the allied forms by its rather long, coarsely and densely punctured, reddish thorax, the sides of which are parallel behind and gradually narrowed and rounded in front, and by its antennæ being fusco-ferruginous with the two basal joints red.

33. **Hymenorus ruficollis.** (Tab. XX. fig. 8.)

Oblong ovate, brownish-piceous, the head and thorax more or less red, very dull and opaque, thickly clothed with short pubescence. Head closely and coarsely punctured; eyes small and widely separated in both

sexes; antennæ short and stout, the joints very distinctly widened towards their apex, ferruginous, the intermediate joints sometimes a little darker; prothorax transverse, moderately convex, the sides converging from a little before the base and rounded and narrowing in front, the hind angles rectangular, the base feebly bisinuate, the basal foveæ scarcely indicated, the surface very densely and rugosely punctured; scutellum closely punctured; elytra very little wider than the prothorax at the base, rather short, finely punctate-striate, the interstices flat and closely punctured; beneath shining, reddish, the venter more or less piceous, rather closely and coarsely punctured, the fourth and fifth ventral segments much smoother; legs short, ferruginous, the first joint of the hind tarsi scarcely so long as the following joints united.

Length $4\frac{3}{4}$–$5\frac{2}{3}$ millim.; breadth 2–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. Mexico, Northern Sonora (*Morrison*).

Numerous examples. Duller than *H. densus*; the head more closely punctured; the eyes smaller and more widely separated in both sexes; the antennæ entirely ferruginous; the thorax rather more rounded at the sides, much more densely punctured, and with the hind angles not so sharp.

34. **Hymenorus guatemalensis.** (Tab. XX. fig. 9.)

Oblong ovate, rather convex, varying in colour from light reddish-brown to brownish-piceous, shining, thickly clothed with short pubescence. Head closely and rather coarsely punctured; eyes small, widely separated in both sexes; antennæ slender, moderately long, the third joint a little longer than the fourth, ferruginous; prothorax short, transverse, rather convex, the sides moderately rounded and converging from the base, the hind angles rectangular, the base rather strongly bisinuate, the basal foveæ indistinctly indicated, the disc shallowly transversely impressed behind, the surface densely and somewhat coarsely punctured; scutellum closely punctured; elytra wider than the prothorax at the base, rather long, coarsely punctate-striate, the interstices feebly convex and sparsely and comparatively coarsely punctured; legs rather long and slender, ferruginous.

Length $6\frac{1}{4}$–$6\frac{2}{3}$ millim.; breadth $2\frac{1}{4}$–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. Guatemala, Cerro Zunil, Dueñas, Capetillo (*Champion*).

Many specimens. This species, on account of the shining surface, coarsely-sculptured elytra, slender antennæ, and the shape of the thorax (the sides rapidly converging from the base), has a different facies from most of the allied forms.

35. **Hymenorus pallidus.**

Oblong ovate, dull reddish-testaceous, the elytra slightly shining, thickly clothed with short pubescence. Head closely and coarsely punctured, the vertex more coarsely so; eyes small and widely separated in both sexes; antennæ stout, the joints rather long, and very little widened towards their apex, the third joint a little longer than the fourth, testaceous; prothorax short, transverse, not very convex, the sides moderately rounded and gradually narrowing from the base, the hind angles sharply rectangular, the base rather strongly bisinuate, the disc broadly and shallowly transversely impressed behind, the basal foveæ indistinct, the surface very densely and rugulosely punctured; scutellum closely punctured; elytra wider than the prothorax at the base, moderately long, coarsely punctate-striate, the interstices slightly convex and closely and rather finely punctured; legs testaceous.

Length $5\frac{2}{3}$–6 millim.; breadth $2\frac{1}{3}$–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Ventanas in Durango, Acapulco and Chilpancingo in Guerrero (*Höge*).

Numerous examples. This insect is allied to *H. guatemalensis*; but differs from it in

its stouter antennæ, dull and much more densely punctured thorax, shorter elytra, and more closely and more finely punctured interstices. In both species the elytra are very distinctly wider than the prothorax at the base. The comparatively small and narrow thorax will distinguish *H. pallidus* from the other species with small eyes in both sexes.

36. **Hymenorus villosus.** (Tab. XX. fig. 10, ♀.)

Oblong ovate, rather convex, light reddish-brown, the head and elytra shining, the prothorax duller, thickly clothed with long erect fulvous hairs. Head closely and coarsely punctured; eyes (♀) rather small, widely separated; antennæ stout, rather short, ferruginous; prothorax convex, transverse, the sides very gradually converging from the base and rounded in front, the hind angles subrectangular, the base very feebly bisinuate, the surface unimpressed and densely and rugosely punctured, the punctures here and there longitudinally confluent; scutellum closely and finely punctured; elytra rather long, distinctly wider than the prothorax at the base, coarsely and deeply punctate-striate, the interstices convex and sparsely and coarsely punctured; beneath sparsely and coarsely punctured; legs rather stout, ferruginous.

Length 7 millim.; breadth 3 millim. (♀.)

Hab. Mexico, Cuernavaca in Morelos (*Höge*).

One example. This species is at once distinguished from all others of the genus by its densely villose surface; it has the base of the thorax very feebly bisinuate.

37. **Hymenorus parvicollis.**

Elongate, rather narrow and depressed, piceous-brown, slightly shining, somewhat thickly clothed with short pubescence. Head (including the vertex) closely and rather coarsely punctured; eyes (♂) small, widely separated; antennæ (♂) rather long and slender, fusco-ferruginous; prothorax small and narrow, strongly transverse, the sides almost straight behind and a little narrowed and rounded in front, the hind angles rather obtuse, the disc shallowly transversely impressed behind, the base feebly bisinuate, the surface densely and rather coarsely punctured; scutellum closely punctured; elytra long, considerably wider than the prothorax at the base, subparallel in their basal half, rather coarsely (but shallowly) punctate-striate, the interstices flat and somewhat closely punctured; beneath very sparsely and finely punctured, the sides of the metasternum more coarsely so; legs slender, ferruginous, the basal joint of the hind tarsi the length of the following joints united, the tibiæ straight.

Length $4\frac{3}{4}$ millim.; breadth $1\frac{3}{4}$ millim. (♂.)

Hab. Mexico, Ventanas in Durango 2000 feet (*Höge*).

One immature male example. This small species is not very closely allied to any other noticed here; it somewhat approaches *H. guatemalensis* and *H. pallidus*.

38. **Hymenorus deplanatus.** (Tab. XX. fig. 11, ♂.)

Elongate, narrow, depressed, brownish-piceous, dull, thickly clothed with short pubescence. Head finely and closely punctured, the intraocular space and the vertex sparsely and more coarsely so; eyes small and widely separated in both sexes; antennæ rather short, not longer in the male, the joints very little widened towards their apex, ferruginous; prothorax transverse, the sides parallel behind and rounded and slightly narrowed in front, the hind angles subrectangular, the basal foveæ indistinctly indicated, the base feebly bisinuate, the surface finely and very densely punctured; scutellum closely punctured; elytra long, a little wider than the prothorax at the base, the sides almost straight from the base to the middle, finely and closely punctate-striate, the interstices flat and finely and closely punctured; beneath sparsely and finely punctured, the metasternum at the sides much more coarsely so and in the middle (in both sexes)

deeply canaliculate and very closely and finely punctured; legs moderately slender, stouter in the male, ferruginous, the first joint of the hind tarsi the length of the following joints united.

♂. Intermediate and posterior tibiæ curved, the former strongly and abruptly widened on the inner side at the apex and the latter sinuous within. The lateral lobes of the last ventral segment slightly curved, broad at the base, and gradually narrowing outwardly.

Length 5 millim.; breadth $1\frac{3}{4}$ millim. (♂ ♀.)

Hab. MEXICO, Northern Sonora (*Morrison*).

Two examples. In its small size and depressed form this species resembles *H. parvicollis*, from which it differs in its opaque surface, longer thorax, closer punctuation, different male characters, &c.

39. Hymenorus corticarioides.

Oblong ovate, reddish-testaceous, opaque, thickly clothed with short pubescence. Head closely and finely punctured; eyes (♀) small and widely separated; antennæ (♀) short and stout, the joints not much widened towards their apex, testaceous; prothorax transverse, rather convex, the sides straight behind and rounded and narrowing in front, the hind angles rectangular, the base feebly bisinuate, the surface unimpressed and densely and finely punctured; scutellum closely punctured; elytra a little wider than the prothorax at the base, rather short, coarsely punctate-striate, the interstices slightly convex and finely and closely punctured; legs testaceous, rather short, the first joint of the posterior tarsi not longer than the following joints united.

Length $4\frac{1}{2}$–$4\frac{3}{4}$ millim.; breadth $1\frac{2}{3}$–$1\frac{3}{4}$ millim. (♀.)

Hab. MEXICO, Acapulco, Colima city (*Höge*).

Two female examples. This is the smallest Central-American representative of the genus; it is not very nearly allied to any other species here enumerated, though perhaps nearest to *H. pallidus*.

POLYIDUS.

Last joint of the maxillary palpi broadly triangular, its apical side rather longer than the outer side, the corresponding joint of the labial pair broad; mandibles truncate at the apex; head broad, deeply sunk into the prothorax, almost vertical in repose; eyes small and transverse, widely separated in both sexes; antennæ long and subfiliform, reaching nearly to the middle of the elytra in the male, the joints a little widened towards their apex in the female, 3–11 about equal in length; prothorax twice as broad as long, the sides rounded and rapidly converging from the base, the base feebly bisinuate; scutellum broad, transversely triangular; elytra rather short, the sides a little rounded and forming a continuous line with the prothorax, punctate-striate; prosternum abruptly declivous behind; mesosternum longitudinally and convexly raised between the intermediate coxæ, its anterior face vertical; intercoxal process moderately broad; legs rather short; the third and fourth joints of the anterior and intermediate and the penultimate joint of the posterior tarsi in the male, and the penultimate joint of all in the female, rather broadly lobed beneath; the first joint of the hind tarsi short, shorter than the following joints united; claws pectinate; body broadly ovate, convex, winged, thickly pubescent.

This genus resembles *Menes*, but differs from it in its longer legs, long and more filiform antennæ, and differently-formed mesosternum. *Polyidus* may be readily separated from all other genera of Cistelidæ here enumerated by the shape of the mesosternum; in general form it is almost intermediate between *Menes* and certain *Isomira*, e. g. *I. obsoleta*. The single species referred to it is from Guatemala and South-western Mexico.

1. **Polyidus meridionalis.** (Tab. XX. figg. 13, 13 *c*, ♂; 13 *a*, labium; 13 *b*, maxilla and maxillary palpus.)

Brownish-piceous, slightly shining, thickly clothed with long pubescence. Head closely and rather coarsely punctured; antennæ ferruginous or fusco-ferruginous, the third and fourth joints equal in length; prothorax convex, the basal foveæ scarcely indicated, the hind angles subrectangular, the disc unimpressed, the surface somewhat coarsely, closely, and uniformly punctured; scutellum closely and finely punctured; elytra with rows of coarse punctures placed upon shallow striæ, the striæ becoming deeper towards the sides and apex, the interstices broad and almost flat on the disc and feebly convex laterally and towards the apex; beneath sparsely and rather coarsely punctured, the metasternum and side-pieces very coarsely so, the flanks of the prothorax almost smooth; legs rather slender, fusco-ferruginous, the tibiæ similar in both sexes.

♂. The lateral lobes of the last ventral segment slightly curved, the apices blunt and clothed with long fine hairs; the central sheath narrow and acuminate. (Fig. 13 *c*.)

Length $7\frac{1}{2}$–$8\frac{1}{4}$ millim.; breadth $3\frac{2}{3}$–4 millim. (♂ ♀.)

Hab. Mexico, Tapachula in Chiapas (*Höge*); Guatemala, El Reposo 800 feet (*Champion*).

Four examples from Guatemala and one from Mexico, all captured on the lower part of the Pacific slope and at localities not very far distant from each other.

MENES.

Last joint of the labial palpi broad ovate, broadly truncate at the apex; last joint of the maxillary palpi broadly triangular, its apical side the longest; mandibles very feebly bifid at the apex; antennæ stout, rather short, the joints widening a little towards their apex in both sexes—3 distinctly longer than 4, 6–11 about equal in length; head broad; eyes small, very widely separated; prothorax very broad and short, about twice as broad as long, much rounded at the sides, transversely convex, unimpressed, the base very feebly bisinuate, the hind angles very obtuse; scutellum strongly transverse, triangular; elytra short, broad, the sides almost forming (when viewed from above) a continuous outline with the equally broad prothorax; legs very short and stout, thickly pubescent; anterior and intermediate tarsi with the third and fourth joints, and the posterior tarsi with the penultimate joint, broadly lobed beneath, the first joint of the latter short; claws pectinate; prosternum abruptly declivous behind; metasternum very short; intercoxal process broad; body short ovate, broad, convex, thickly pubescent, winged.

This very distinct genus contains two species from Mexico. The very short ovate, convex shape and short legs give *Menes* quite a different facies from any of the previously described members of this family. In its broad intercoxal process *Menes* approaches the 'Lystronychides'; but it is clearly more nearly allied to *Polyidus*, *Hymenorus*, &c. The sexes are scarcely distinguishable by external characters. The wings are small and apparently not adapted for flying.

1. **Menes meridanus.** (Tab. XX. fig. 12.)

Brownish-black, slightly shining, somewhat thickly pubescent. Head closely and rather coarsely punctured; prothorax closely punctured, the punctures fine on the disc and becoming coarser towards the sides; scutellum closely and finely punctured; elytra deeply striate, the striæ with coarse, oblong, rather distantly placed impressions, the interstices feebly convex, flatter on the basal half of the disc, and finely and thickly punctured; beneath more shining, closely and coarsely punctured, the metasternum with exceedingly coarse impressions; legs and antennæ ferruginous or fusco-ferruginous.

Length $6\frac{1}{4}$–7 millim.; breadth $3\frac{1}{2}$–$3\frac{2}{3}$ millim.

Hab. Mexico, Merida in Yucatan (*Höge*), Temax in N. Yucatan (*Gaumer*).

Apparently a common insect in Yucatan, whence we have received about 100 examples.

2. Menes rotundatus.

Piceous-brown, opaque, very thickly pubescent. Head closely and rugulosely punctured; eyes smaller than in *M. meridanus*, and still more widely separated; prothorax densely and rugulosely punctured; elytra rather deeply striate, the striæ with oblong, moderately coarse, and somewhat closely placed impressions, the interstices slightly convex and very closely and subasperately punctured; beneath coarsely and closely punctured, the metasternum with exceedingly coarse impressions; legs and antennæ ferruginous or fusco-ferruginous.

Length $4\frac{1}{2}$–$5\frac{1}{2}$ millim.; breadth $2\frac{1}{2}$–3 millim.

Hab. Mexico (*Flohr, coll. F. Bates*), Jalapa (*Höge*).

Numerous examples. Smaller and shorter than *M. meridanus*; the upper surface opaque, rugulosely punctured, and more thickly pubescent; the elytral striæ less coarsely punctured; the eyes smaller and more widely separated, &c. In unabraded specimens the pubescence is so close as to partly hide the sculpture.

MENŒCEUS.

Last joint of the maxillary palpi broadly triangular, its apical side rather longer than the outer side; last joint of the labial palpi broad and subsecuriform; mandibles subtruncate; head very short and broad, deeply inserted, vertical in repose; eyes large and transverse, convex, narrowly separated in both sexes; antennæ stout, joints 3 and 4 about equal in length (very broadly and irregularly dilated in the male of *M. crassicornis*); prothorax convex, very large and broad, nearly twice as broad as long, the sides rounded and greatly expanded and rapidly converging from the base, the hind angles very prominent and rather sharp, projecting laterally a little beyond the base of the elytra, and extending backwards, the base bisinuate; scutellum rather large, transversely scutiform; elytra moderately long, narrower than the prothorax at the base, very slightly rounded at the sides and widest a little before the middle, finely punctate-striate; prosternum subhorizontal and very slightly and convexly produced (*M. crassicornis*), or convex and abruptly declivous behind (*M. æqualis*, *M. texanus*); epipleuræ broad at the base; flanks of the prothorax deeply concave behind; legs rather short, pubescent; the penultimate joint of all the tarsi distinctly lobed beneath in both sexes, the first joint of the posterior pair rather longer than the following joints united; tibiæ similar in both sexes; the four hinder femora somewhat flattened; claws pectinate; body oblong ovate, winged, pubescent.

This genus includes three species—two from Mexico or Guatemala and one from Texas. *Menœceus* is no doubt closely allied to *Hymenorus*, but it is easily separated from it by the very short and greatly dilated thorax, the hind angles of which extend laterally beyond and are incumbent upon the shoulders of the elytra, and the short broad head. *M. crassicornis* has the third and fourth joints of the antennæ distorted and dilated in the male, and the prosternum slightly produced. *M. æqualis* approaches certain *Hymenori* (e.g. *H. emmenastoides*), but has a differently shaped head.

The lateral lobes of the last ventral segment in the male are spoon-shaped or spatulate in all three species.

* *Prosternum subhorizontal, the apex slightly produced; antennæ with joints* 3 *and* 4 *broadly dilated in the male.*

1. **Menœceus crassicornis.** (Tab. XX. figg. 14, 14 *a*, ♂.)

Oblong ovate, moderately convex, reddish- or piceous-brown, dull, thickly pubescent. Head rather sparsely and somewhat coarsely punctured, the anterior half a little smoother; antennæ rather long and stout, reaching beyond the first third of the elytra in the male, ferruginous, joints 3 and 4 greatly dilated in the male, 3 a little longer than 4 in the female; prothorax moderately convex, densely and somewhat coarsely punctured, the disc almost unimpressed, the basal foveæ feebly indicated or obsolete; scutellum very closely punctured; elytra finely punctate-striate, the punctures oblong in shape and approximate, the interstices almost flat and rather thickly and not very finely punctured; beneath more shining, the prothorax in front, the mesothorax, the epipleuræ, and the metasternal side-pieces very closely and somewhat coarsely punctured; the mesosternum with coarse scattered impressions in front, smooth behind, the central part finely and rather closely punctured; the ventral surface with fine and very widely scattered punctures, the fifth segment unimpressed in the male; legs ferruginous.

♂. Antennæ with joint 3 very broadly and triangularly dilated; 4 distorted, as long as and rather broader than 3, thickened beneath, and widening outwardly; 5 rather narrower than 4, broader than long; 6 about as long as broad and narrower than 5; 7–11 decreasing in width, but increasing in length.

Length 6–7½ millim.; breadth 2⅔–3½ millim. (♂ ♀.)

Hab. Mexico, Matamoros Izucar and Atlixco in Puebla, Cuernavaca and Yautepec in Morelos, Jalapa, Acapulco (*Höge*); Guatemala, Capetillo, Dueñas (*Champion*).

Numerous examples, five of which are males. The male of this insect is one of the most remarkable of the Central-American forms of Cistelidæ.

** *Prosternum convex, declivous behind; antennæ simple in the male.*

2. **Menœceus æqualis.** (Tab. XX. figg. 15, 15 *c*, ♂; 15 *a*, labium; 15 *b*, maxilla and maxillary palpus.)

Oblong ovate, moderately convex, dull brownish-black, thickly pubescent. Head sparsely and finely punctured; eyes (♂) very narrowly separated; antennæ rather short, not reaching to the first fourth of the elytra in the male, joints 3 and 4 equal in length, fusco-ferruginous; prothorax convex, finely, shallowly, and somewhat densely punctured, the disc very shallowly longitudinally impressed in the middle behind, the basal foveæ scarcely indicated; scutellum closely punctured; elytra finely punctate-striate, the interstices flat and finely and rather closely punctured; beneath punctured as in *M. crassicornis*; legs stout, fusco-ferruginous.

Length 8½–9½ millim.; breadth 3⅔–4⅓ millim. (♂.)

Hab. Mexico, Cordova (*Höge*).

Two examples, apparently both males. Larger and longer than *M. crassicornis*; the eyes more narrowly separated and the antennæ simple in the male; the thorax more convex and more finely and much less densely punctured; the prosternum differently shaped, &c.

The Texan species belongs to this section, and I give below a short description of it *.

* **Menœceus texanus.**

Ovate, rather broad, piceous-brown, dull, thickly pubescent. Head sparsely and rather coarsely punctured;

DIOPŒNUS.

Last joint of the maxillary palpi broadly triangular, its apical and outer sides about equal; last joint of the labial palpi broad ovate, broadly truncate at the apex; mandibles at the apex narrow and very feebly bifid; head very short and broad, deeply and obliquely inserted beneath the anterior edge of the prothorax, and invisible from above; eyes very large and transverse, convex, very narrowly separated; antennæ stout, much compressed, short, reaching a little beyond the base of the prothorax, the joints closely articulated, broad at their base, and each widening a little outwardly—1 short and stout, 2 small, strongly transverse, 3 subtriangular, twice as long as 2, 4–8 gradually increasing in length and breadth, 4 a little longer and broader than 3, 9 and 10 each the length of but narrower than 8, 11 longer and much narrower than 10 and very obliquely truncate at the apex; prothorax very large and broad, more than twice as broad as long, greatly expanded at the sides and broader than the elytra at the base, the base bisinuate and with a distinct median lobe, the hind angles very prominent, the sides very rapidly converging from the base; scutellum large, transversely scutiform; elytra short, narrowing from the base, very strongly margined; epipleuræ very broad and concave at the base, rapidly narrowing behind; the flanks of the prothorax broadly and deeply concave; anterior coxæ globose; prosternum very narrow, convex and abruptly declivous behind, and gradually sloping in front; intermediate coxæ narrowly separated; legs very short and stout, broadly compressed; tarsi short, the basal joint very stout and that of the posterior pair shorter than the following joints united, the third and fourth joints of the anterior and intermediate pairs and the penultimate joint of the hind pair feebly lobed beneath; claws pectinate; body broad ovate, rather depressed, pubescent, winged.

This genus contains a single species of very peculiar aspect, which in its general facies departs widely from any known form of Cistelidæ and somewhat resembles *Oochrotus*. The chief characters lie in the short and broadly compressed legs and antennæ, and in the head being very deeply sunk into the underside of the thorax, so as to be completely invisible from above. In the very large and greatly dilated thorax, with the hind angles projecting laterally beyond the base of the elytra, it approaches the preceding genus. The broadly concave flanks of the thorax and epipleuræ form cavities for the reception of the two anterior pairs of legs; the head in repose is obliquely withdrawn up to the eyes and does not lie upon the anterior face of the prosternum.

The description is made from a single male example, which was captured by Herr Höge during his second Mexican expedition.

1. **Diopœnus compressicornis.** (Tab. XX. fig. 16, ♂.)

Broad ovate, depressed, brownish-castaneous, slightly shining, thickly clothed with short pubescence. Head very finely and sparsely punctured; prothorax convex but depressed on the disc, closely and very

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eyes (♂) very large, narrowly separated; antennæ (♂) stout, rather short, ferruginous; prothorax very broad, the disc obsoletely canaliculate behind, the surface closely (but not densely), finely, and shallowly punctured; elytra finely punctate-striate, the interstices quite flat and finely and rather closely punctured; legs ferruginous; the lateral lobes of the last ventral segment broad and spoon-shaped and clothed with long hairs at the apex.

Length $7\frac{1}{4}$ millim.; breadth $3\frac{1}{2}$ millim. (♂.)

Hab. North America, Texas.

A single male example, kindly communicated by Dr. Horn. Much broader than *M. crassicornis*, the antennæ simple in the male, the thorax more finely and more sparsely punctured, &c.

minutely punctured, the hind angles laterally projecting beyond the base of the elytra and rather obtuse, the basal foveæ fine and shallow but distinct, the median basal lobe transversely impressed within; scutellum very closely and minutely punctured; elytra with rows of minute punctures, the interstices very broad and flat and closely and minutely punctured, the punctures confused with those of the striæ; beneath closely and not very finely punctured, the sides of the metasternum with coarser and more scattered impressions, the flanks of the prothorax almost smooth within; legs and antennæ ferruginous and pubescent, the former finely and rather sparsely punctured.

♂. The lateral lobes of the last ventral segment inwardly curved, gradually narrowing towards the apex.

Length 7 millim.; breadth (at base of prothorax) 4 millim. (♂.)

Hab. Mexico, Matamoros Izucar in Puebla (*Höge*).

PITHOLAUS.

Last joint of the maxillary palpi elongate triangular, its apical side nearly as long as the outer side and somewhat rounded; last joint of the labial palpi broad ovate, truncate at the apex; mandibles bifid; head short and broad, deeply sunk into the prothorax; eyes small and widely separated in both sexes; antennæ elongate and rather stout, in the male extending considerably beyond the middle of the elytra, joint 3 in the male shorter than, but in the female about as long as, 4; prothorax transverse, constricted at the sides behind, distinctly margined on all sides, the base truncate in the middle, the hind angles prominent and directed a little backwards; elytra truncate and only a little wider than the prothorax at the base, short, ovate (almost gibbous in the female), the sides compressed at some distance beyond the middle and thence to the apex obliquely converging, punctate-striate; metasternum exceedingly short; abdomen in the male with a short (but hidden) sixth ventral segment, the latter without lateral lobes; legs long and slender, sparsely pubescent, the penultimate joint of the tarsi lobed beneath; claws pectinate; body obovate, convex, glabrous, apterous.

This genus contains a single species from the highlands of Guatemala. *Pitholaus* is easily separated from the allied forms by its obovate form, apterous body, long limbs, short and broad head, posteriorly constricted thorax, lobed tarsi, and Helopiform facies.

1. **Pitholaus helopioides.** (Tab. XX. figg. 17, ♂; 17 *a*, labium; 17 *b*, maxilla and maxillary palpus.)

Bright brownish-bronze, glabrous. Head with fine scattered punctures, the transverse frontal depression rather deep; antennæ fusco-ferruginous, longer and stouter in the male, joints 4–10 of elongate-triangular shape; prothorax convex, much rounded at the sides anteriorly and constricted behind, the hind angles rectangular, the basal foveæ usually rather deep, the disc shallowly impressed in the middle before the base, the surface finely and sparsely punctured; scutellum almost smooth; elytra with rows of punctures placed upon fine shallow striæ, the punctures rather coarse towards the base and rapidly becoming very much finer posteriorly, the interstices almost flat and with a few widely scattered very minute punctures, the lateral margins posteriorly and the apex often more or less testaceous; beneath shining, the ventral surface almost impunctate (a few minute scattered punctures being alone visible) and with very fine and shallow longitudinal wrinkles, the metasternum with widely scattered coarsish punctures; legs more or less ferruginous.

Length $5\frac{1}{3}$–$6\frac{1}{3}$ millim.; breadth $2\frac{1}{2}$–3 millim. (♂ ♀.)

Hab. Guatemala, Volcan de Agua 8500 to 10,500 feet, Quezaltenango 7800 feet (*Champion*).

Numerous examples.

PHEDIUS.

Last joint of the maxillary palpi elongate-triangular, its apical and outer sides about equal; mandibles feebly cleft or subtruncate; antennæ rather short, the joints more or less filiform or subcylindrical, the third longer than the fourth; head long and broad, strongly exserted; eyes distant from the prothorax, very small, very widely separated; prothorax subquadrate, more or less convex, transverse or nearly as long as broad, the base subtruncate or slightly rounded (sometimes feebly emarginate in the middle and a little sinuate on each side), the sides and base feebly margined, the lateral margins not visible from above; scutellum rather large, transversely triangular; elytra moderately long, much wider than the prothorax and truncate at the base, ovate, widest behind the middle and thence to the apex obliquely converging, the humeri more or less rounded, the surface with rows of fine or coarser punctures placed upon almost obsolete striæ (the punctures of the interstices sometimes as coarse as those of the striæ) or confusedly punctured; coxæ somewhat widely separated; metasternum short; intercoxal process triangular, rather broad; legs moderately long; the third and fourth joints of the anterior and intermediate tarsi and the penultimate joint of the hind tarsi feebly lobed beneath; claws pectinate; body apterous, obovate, clothed with long erect hairs, pubescent, or subglabrous.

This genus contains seven species, all from Mexico. The broad exserted head, small eyes, filiform antennæ, subquadrate thorax, short metasternum, apterous body, and obovate shape distinguish *Phedius* readily enough from the allied forms. Except for the pectinate claws, some of the species might be easily mistaken for 'Helopides'; all are of a black or sombre colour. The subglabrous species appear to be clothed with pubescence when fresh, but the pubescence soon wears off.

I am only able to identify for certain the females, the various examples dissected all belonging to this sex; we have, however, a very limited number of specimens of each species. From *Narses* the genus is readily distinguished by the much smaller eyes, the shorter and filiform antennæ, more rounded humeri, less triangular apical joint of the maxillary palpi, very feebly lobed tarsi, more slender femora, obovate shape, &c.

1. *Upper surface clothed with long erect hairs.*

1. **Phedius chevrolati.** (Tab. XX. fig. 18, ♀.)

Black, opaque, somewhat thickly clothed with long erect hairs. Head very densely and rugosely punctured, the transverse frontal depression deep; antennæ very stout, the joints subcylindrical, obscure ferruginous; prothorax convex, broad, transverse, the sides a little rounded about the middle and a little narrowed and obliquely converging behind, the hind angles obtuse, the base truncate, the basal foveæ obsolete, the surface very densely and rugosely punctured, the punctures here and there obliquely or longitudinally confluent; scutellum sparsely punctured; elytra convex, broadly truncate at the base, the disc a little flattened anteriorly, the surface sparsely, finely, and confusedly punctured, the punctures becoming finer towards the apex and coarser and more crowded at the base, the interspaces quite flat; beneath shining, piceous, coarsely punctured, the ventral surface more finely and sparsely so; legs stout, thickly pubescent, piceous, the tarsi ferruginous.

Length $8\frac{1}{2}$–9 millim.; breadth $3\frac{3}{4}$ millim. (♀.)

Hab. Mexico, Cordova (*Sallé*).

Two female examples. This insect may be easily recognized by the exceedingly rugose punctuation of the head and thorax, the finely and confusedly punctured elytra, the long erect hairs of the upper surface, and the very stout antennæ. Labelled

Lystronychus morio, Chevr., in the Sallé collection; it differs, however, from *Lystronychus* in the lobed penultimate joint of the tarsi, apterous body, &c. An apterous undescribed genus allied to *Lystronychus*, from Bolivia, somewhat approaches it.

2. **Phedius carbonarius.** (Tab. XX. fig. 19, ♀.)

Rather elongate, black, opaque, clothed with long scattered suberect hairs. Head densely and rather coarsely punctured, the transverse frontal depression large and deep; antennæ stout, black; prothorax subquadrate, transverse, a little rounded at the sides before the middle, feebly and about equally narrowed before and behind, the hind angles rather obtuse, the base subtruncate, the disc shallowly longitudinally impressed in the middle behind, the basal foveæ obsolete, the surface coarsely and rugosely punctured; scutellum sparsely punctured; elytra with rows of fine punctures placed upon very fine obsolete striæ, the punctures rather distinct one from another, the interstices quite flat and each with two rows of scattered similar punctures, the punctures becoming finer towards the apex and coarser towards the base; beneath finely and sparsely punctured; legs stout, roughly punctured and pubescent, black.

Length 8½ millim.; breadth 3½ millim. (♀.)

Hab. Mexico, Tula in Hidalgo (*Höge*).

A single female example. This species may be at once identified from all others of the genus, except *P. chevrolati*, by the upper surface being clothed with long scattered suberect hairs; and from *P. chevrolati* by its more elongate shape, more slender antennæ, less rugose thorax, and more regularly punctured elytra. From abraded *P. funestus* it is distinguished by the punctures of the elytral interstices not being finer than those of the striæ.

2. *Upper surface subglabrous (or, in freshly-emerged examples, clothed with short pubescence).*

a. *Prothorax and the elytral interstices finely and sparsely punctured.*

3. **Phedius hidalgoensis.**

Piceous-black, dull, subglabrous. Head finely and rather sparsely punctured, the transverse frontal depression large and deep; antennæ rather short, fusco-ferruginous; prothorax much broader than long, transversely convex, a little rounded at the sides and about equally narrowed before and behind, the hind angles rounded, the base somewhat rounded and distinctly emarginate in the middle and sinuate on each side, the basal foveæ deep and oblique and extending outwards, the disc broadly and rather deeply longitudinally impressed in the middle behind, the surface finely (but deeply) and sparsely punctured: scutellum with a few scattered punctures; elytra broad, finely and shallowly punctate-striate throughout, the interstices flat and with widely scattered very shallow fine punctures, the punctures finer than those of the striæ; beneath very sparsely punctured, the ventral surface with a few very widely scattered minute punctures; legs pubescent, rather stout, piceous, the tarsi ferruginous.

Length 9 millim.; breadth 3¾ millim.

Hab. Mexico, Tula in Hidalgo (*Höge*).

One specimen only. The transversely convex and sparsely punctured thorax at once distinguishes this species from the others of the genus.

b. *Prothorax and the elytral interstices rather coarsely punctured.*

4. **Phedius cylindricollis.** (Tab. XX. fig. 20, ♀.)

Black, shining, subglabrous. Head rather coarsely and somewhat closely punctured, a transverse space on the vertex impunctate, the transverse frontal depression deep; antennæ fusco-ferruginous, rather stout; prothorax long and cylindrical, not much broader than long, the sides parallel from the middle to the base and a little narrowed and rounded in front, the hind angles obtusely rectangular, the basal foveæ indistinct, the base subtruncate, the disc longitudinally impressed in the middle behind, the surface rather coarsely and somewhat closely punctured; scutellum sparsely punctured; elytra with rows of rather coarse punctures placed upon fine shallow striæ, the interstices flat and somewhat thickly punctured, the punctures deep and as coarse as those of the striæ but (like those of the striæ) becoming finer towards the apex, the striæ indistinct at the sides and beyond the middle; beneath sparsely punctured; legs pubescent, piceous or ferruginous, the tarsi lighter.

Length 7–8½ millim.; breadth 3¼–3½ millim. (♀.)

Hab. Mexico, Guadalajara in Jalisco (*Höge*).

Three examples, apparently all females. The thorax of one specimen has a deep rounded fovea on each side of the disc about the middle, and the base an emargination in front of the scutellum, but this is probably due to accidental circumstances. The long and cylindrical thorax, the coarsely and somewhat confusedly punctured elytra, and the rather shining surface are the chief characters of this species; the longer and much more sparsely punctured thorax distinguishes it from its nearest ally, *P. obovatus.*

5. **Phedius obovatus.**

Black or brownish-piceous, subopaque, the elytra slightly shining, subglabrous (when fresh thickly clothed with short pubescence). Head densely and rugulosely punctured, the punctures on the vertex here and there confluent, the epistoma more sparsely punctured, the transverse frontal depression deep; antennæ fusco-ferruginous, moderately stout; prothorax short, transverse, the sides feebly rounded and about equally narrowed before and behind, the hind angles obtuse, the base subtruncate, the basal foveæ obsolete, the disc unimpressed, the surface densely and rugulosely punctured, the punctures here and there longitudinally or obliquely confluent; scutellum somewhat thickly punctured; elytra punctate-striate throughout, the punctures rather coarse and deep and closely placed upon shallow striæ, the interstices flat and rather thickly punctured, the punctures fully as coarse as those of the striæ; beneath sparsely but coarsely (the sides of the venter more finely) punctured; legs pubescent, piceous, the tarsi lighter.

Length 6⅔–7½ millim.; breadth 2⅔–3⅓ millim. (♀.)

Hab. Mexico, Guanajuato (*Sallé*), Aguas Calientes city (*Höge*).

Three examples. One of these is immature and has the upper surface clothed with short pubescence, the other two being subglabrous. The punctures of the elytral striæ are placed close together, and the striæ in consequence are distinct from the equally coarsely punctured interstices. The coarsely punctured elytral interstices separate this species from all but *P. cylindricollis*; the thorax is more rugosely punctured than in *P. mexicanus.*

c. *Prothorax rugulosely, the elytral interstices finely, punctured.*

6. Phedius mexicanus.

Black or brownish-piceous, opaque, subglabrous (when fresh clothed with very short pubescence). Head closely and somewhat coarsely punctured, a transverse narrow space on the vertex impunctate, the transverse frontal depression rather shallow; antennæ piceous or ferruginous, rather stout; prothorax long and convex, not very much broader than long, the sides almost straight from the middle to the base and a little narrowed and rounded in front, the hind angles obtusely rectangular, the base subtruncate (sometimes feebly emarginate before the scutellum), the disc (in some examples) shallowly canaliculate, the basal foveæ indistinct, the surface densely and rugulosely punctured; scutellum thickly punctured; elytra a little depressed on the disc, very finely and shallowly punctate-striate (the punctures rather scattered beyond the basal third), the interstices quite flat and sparsely and minutely punctured, the punctures (except at the extreme base) finer than those of the striæ; beneath sparsely punctured, the ventral surface more finely so; legs piceous, the tarsi ferruginous.

Length 7–7½ millim.; breadth 3⅓–3½ millim. (♀.)

Hab. Mexico, Guanajuato (*Sallé*).

Six examples. *P. mexicanus* may be separated from all the preceding species, except *P. carbonarius*, by the rugose thorax and finely punctured elytra; and from the latter by the almost glabrous surface.

7. Phedius funestus.

Black, opaque, subglabrous. Head closely and rather coarsely punctured, the transverse frontal depression deep; antennæ piceous or fusco-ferruginous; prothorax short, transverse, the sides a little rounded and about equally narrowed before and behind, the hind angles obtuse and almost rounded, the base subtruncate but sometimes feebly emarginate in the middle and on each side, the basal foveæ indistinct, the disc unimpressed, the surface densely and rugulosely punctured; scutellum thickly punctured; elytra finely punctate-striate, the punctures becoming much finer beyond the middle, the interstices quite flat and sparsely and very finely punctured, the punctures (like those of the striæ) coarser at the base and finer towards the apex; beneath coarsely, the venter much more finely and sparsely, punctured; legs piceous, the tarsi lighter.

Length 8–9⅓ millim.; breadth 3½–4 millim.

Hab. Mexico, San Antonio de Arriba (*Sallé*), Tehuacan, Oaxaca (*Höge*).

Four examples. This insect is closely allied to *P. mexicanus*; it differs from it in its larger size, more convex shape, the elytra less finely and more distinctly punctate-striate, the thorax shorter and more transverse and with the hind angles almost rounded, and the metasternum more coarsely punctured. The thorax is sculptured exactly as in *P. mexicanus* (without trace, however, of a central groove), though the punctures of the elytra are deeper and not so fine. *P. funestus* much resembles certain European species of *Helops*.

TELESICLES.

Last joint of the maxillary palpi elongate-triangular, its apical and outer sides about equal; mandibles bifid; head broad, rather deeply sunk into the prothorax; eyes small, very widely separated; antennæ stout, rather short, joint 3 as long as 4, joints 4–10 rounded at their inner apical angle; prothorax moderately transverse, distinctly margined at the sides and base, constricted at the sides behind, the base subtruncate; scutellum transversely triangular, rather small; elytra truncate and a good deal wider than the prothorax

at the base, moderately long, rounded at the shoulders and thence to beyond the middle parallel, punctate-striate; metasternum long, shallowly grooved in the middle; intermediate and posterior coxæ rather widely separated; posterior coxæ divided into two nearly equal parts by the transverse groove; abdomen with five visible segments; legs slender, moderately long, the penultimate joint of the tarsi feebly lobed beneath; claws pectinate; body elongate, subparallel, depressed, pubescent, winged.

The single species from Northern Mexico included in this genus has quite a different facies from any of the allied Central-American forms, though approaching *Alethia* in some of its characters. The depressed elongate shape, posteriorly constricted thorax, short and stout antennæ, broad head, small eyes, the elytra moderately long and much broader than the thorax, the rather widely separated hinder coxæ, slender legs, and other characters noticed above sufficiently distinguish *Telesicles* from its allies. One example only, apparently a female, has been received.

1. **Telesicles cordatus.** (Tab. XX. fig. 21.)

Light brownish-castaneous, thickly pubescent, shining. Head coarsely and somewhat thickly punctured, the transverse frontal groove deep, the space between the eyes rather convex; prothorax somewhat convex, broader than long, the sides much rounded anteriorly and constricted behind, the hind angles rather prominent, the disc obsoletely canaliculate behind and transversely impressed before the base, the basal foveæ distinct, the surface punctured like that of the head; scutellum finely and closely punctured; elytra depressed, deeply and somewhat coarsely punctate-striate throughout, the interstices almost flat, and each with two irregular rows of coarsish punctures; beneath sparsely and rather coarsely punctured; legs and antennæ ferruginous.

Length 5½ millim.; breadth 2¼ millim. (♀?)

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

CISTELA.

Cistela, Fabricius, Syst. Ent. p. 116 (1775); Lacordaire, Gen. Col. v. p. 504 (1859) (pars).

The Central-American species I include in this genus have the penultimate joint of the tarsi not lobed beneath, the third joint of the antennæ shorter than the fourth (in the males of several very short and only a little longer than the second), and joints 4–10 of the antennæ in the male elongate-triangular or serrate and often much longer than in the female. Two well-marked groups of species appear to be indicated—one having undilated anterior tarsi, and a simple (but hidden) sixth ventral segment, in the male; the other with the basal joints of the anterior tarsi dilated, and the (hidden) sixth ventral segment with strongly developed lateral lobes, in the male. I am unable to satisfactorily separate any of the Central-American representatives from *Cistela*, or to include them in either of the genera proposed by various authors for certain North-American or European species. In the short third joint and serrate antennæ in the male several of the Central-American forms are suggestive of *Chromatia*; the latter, however, is stated to have the sixth ventral segment prominent in this sex, a character not shared by our insects.

In *C. fragilicornis* (the female only of which is known to me) the antennæ are exceedingly long and slender. A large number of species from all parts of the world

have been referred to this genus, but very many of these will have to be separated when the numerous tropical forms are more thoroughly investigated.

1. *Antennæ rather stout, often more or less serrate in the male; species moderate in size.*

* *Sixth ventral segment in the male short (hidden by the fifth), its apical margin truncate and without lateral lobes; anterior tarsi similar in both sexes.*

1. **Cistela nigricornis.** (Tab. XX. figg. 22, 22*a*, ♂.)

Oblong ovate, broad, slightly convex, piceous-brown, sometimes of a lighter and more reddish tint, opaque, thickly clothed with ashy pubescence. Head closely and finely punctured; eyes large and rather narrowly separated in the male, smaller and more distant in the female; antennæ black or piceous (rarely fusco-ferruginous), lighter at the base—(♂) reaching to beyond the first third of the elytra, joint 3 short, not very much longer than 2, joints 4–10 flattened and subserrate within, (♀) shorter, joint 3 longer (though not so long as 4), joints 4–10 narrower and less dilated at their inner apical angle; prothorax very short, strongly transverse, the sides rounded and narrowing from a little before the base, the hind angles rather obtuse, the basal foveæ almost obsolete, the base strongly bisinuate, the surface finely and very densely punctured; scutellum finely and closely punctured; elytra a little rounded at the sides, shallowly striate throughout, the striæ with fine, shallow, closely-placed punctures, the interstices flat or very feebly convex and very finely and closely punctured, the surface not quite so dull as that of the prothorax; beneath finely and closely punctured, the metasternum more sparsely so, the latter with a deep longitudinal groove in the middle; legs rather slender, brownish-piceous or obscure ferruginous. The tarsi similar in both sexes, their antepenultimate joint somewhat produced beneath.

♂. Abdomen with a short but hidden non-lobed sixth ventral segment; the central sheath laterally compressed, the apex slightly hooked above.

Length $5\frac{3}{4}$–$7\frac{3}{4}$ millim.; breadth 3–4 millim. (♂ ♀.)

Hab. Mexico, Ventanas in Durango, Chilpancingo, Jalapa, Almolonga, Tapachula in Chiapas (*Höge*), Oaxaca, Guanajuato, Tehuantepec (*Sallé*); Nicaragua, Chontales (*Belt*); Costa Rica, Cache (*Rogers*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Many specimens from Mexico and one only from each of the other localities. This is apparently the commonest of the allied forms in Mexico. In some male examples the third joint of the antennæ is rather longer than in others; in the single male from Nicaragua (doubtfully referable to the same species) the antennæ are ferruginous and more distinctly serrate, and the metasternum is more sparsely punctured. Immature abraded examples have a rather different facies, owing to their less opaque surface, &c.

2. **Cistela zunilensis.**

Oblong ovate, rather narrow, fusco-testaceous or obscure reddish-brown, dull, thickly pubescent. Head finely and closely punctured; eyes large and rather narrowly separated in the male, smaller and much more widely separated in the female; antennæ fusco-testaceous, often lighter towards the base—(♂) long, reaching fully to the middle of the elytra, joint 3 short, not much longer than 2, joints 4–10 flattened and moderately serrate within, (♀) shorter, narrower, and more slender, joint 3 much longer (nearly as long as 4), joints 4–10 elongate triangular in shape; prothorax very short, strongly transverse, the sides rounded and narrowed from a little before the base, the hind angles subrectangular, the basal foveæ

very shallow, the surface finely and densely punctured; scutellum closely and finely punctured; elytra a little more shining than the prothorax, slightly rounded at the sides, shallowly and very finely punctate-striate, the punctures becoming still finer towards the apex, the interstices flat and thickly punctured; beneath finely and closely punctured; legs fusco-testaceous, slender; the tarsi similar in both sexes, their antepenultimate joint somewhat produced beneath.

♂. Abdomen with a short but hidden non-lobed sixth ventral segment; the central sheath laterally compressed.

Length $5\frac{1}{2}$–$7\frac{1}{2}$ millim.; breadth $2\frac{1}{2}$–$3\frac{1}{2}$ millim. (♂ ♀.)

Hab. GUATEMALA, Cerro Zunil 4000 feet, Sinanja, Senahu in Vera Paz 3000 feet (*Champion*).

Numerous examples from Cerro Zunil and one only from each of the other localities. Narrower and smaller than *C. nigricornis*; the tarsi more slender, the first joint of the two hinder pairs more elongate, the central sheath of the œdeagus not hooked at the apex, &c. The description is made from the Zunil examples, the others being in a mutilated condition.

3. Cistela cinerascens.

Oblong ovate, somewhat depressed, piceous-brown, opaque, thickly clothed with ashy pubescence. Head finely and rather closely punctured; eyes (♂) very small and very widely separated; antennæ (♂) long, fully reaching to the middle of the elytra, joint 3 short, about half the length of 4, joints 4–10 subserrate within, piceous; prothorax broad, strongly transverse, widest about the middle, the sides rounded, and narrowed a little posteriorly and more strongly so in front, the hind angles obtuse, the basal foveæ obsolete, the disc shallowly longitudinally impressed in the middle behind, the surface very finely and densely punctured; scutellum minutely punctured; elytra the width of the prothorax at the base, a little rounded at the sides, finely and shallowly punctate-striate, the punctures closely placed, the interstices very feebly convex and closely and minutely punctured; beneath closely and finely punctured; legs slender, fusco-ferruginous, the tarsi undilated in the male.

♂. Abdomen with a short but hidden non-lobed sixth ventral segment; the central sheath slightly compressed.

Length $5\frac{3}{4}$ millim.; breadth $2\frac{1}{2}$ millim. (♂.)

Hab. MEXICO, Matamoros Izucar (*Höge*).

A single male example. This species may be at once distinguished amongst its allies by the small and widely separated eyes (much smaller and more distant than in the females of the allied forms), and by the thorax being widest about the middle and very distinctly narrowed behind. It is, perhaps, nearest allied to *C. nigricornis*.

4. Cistela calida.

Ovate, rather convex, brownish-castaneous, slightly shining, thickly pubescent. Head finely and rather closely punctured; eyes (♂) large and somewhat narrowly separated; antennæ (♂) rather short, about reaching to the first third of the elytra, joint 3 short, not twice the length of 2, joints 4–10 subserrate within, fusco-ferruginous, lighter towards the base; prothorax strongly transverse, the sides rounded and narrowing almost from the base, the hind angles subrectangular, the basal foveæ shallow but distinct, the surface densely and finely punctured; scutellum closely punctured; elytra rounded at the sides, finely but rather deeply punctate-striate, the interstices almost flat and closely punctured; beneath finely and sparsely punctured, the ventral surface more closely so along the middle, the metasternum with scattered punctures; legs ferruginous; the tarsi not dilated in the male.

♂. Abdomen with a short but hidden non-lobed sixth ventral segment; the central sheath somewhat compressed, and hooked at the apex above.

Length $5\frac{1}{2}$ millim.; breadth $2\frac{1}{2}$ millim. (♂.)

Hab. Panama, David in Chiriqui (*Champion*).

A single male specimen. This insect is perhaps nearest allied to *C. zunilensis*; but differs from it in its less elongate shape, much shorter and less serrate antennæ, shorter legs, deeper (though fine) punctures of the elytral striæ, &c.

** *Sixth ventral segment in the male with strongly-developed lateral lobes, hidden by the fifth; the basal joints of the anterior tarsi (except in* C. decepta) *more or less dilated in the male.*

5. **Cistela decepta.** (Tab. XX. fig. 23.)

Oblong ovate, obscure reddish- or piceous-brown, opaque, thickly pubescent. Head finely and closely punctured, the anterior half more sparsely so; eyes (♂) large and rather narrowly separated; antennæ (♂) ferruginous, the apical joints darker, rather slender and about reaching to the first third of the elytra, joint 3 short, scarcely twice the length of 2, joints 5–10 elongate-triangular in shape; prothorax strongly transverse, the sides rounded and narrowing from a little before the base, the hind angles obtuse, the basal foveæ very shallow but distinct, the surface finely and densely punctured; elytra distinctly wider than the prothorax, very little rounded at the sides, sculptured as in *C. nigricornis*; beneath and the legs narrowing at the apex, much as in *C. nigricornis*, the tarsi, however, more elongate.

♂. The lateral lobes of the last ventral segment widely separated at the base, abruptly and obliquely incurved about the middle, the apices blunt and coarsely setose within; the central sheath broad and flat, abruptly narrowing at the apex, the latter slightly hooked above. (Fig. 23.)

Length $7\frac{1}{2}$ millim.; breadth $3\frac{1}{2}$ millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui (*Champion*).

A single male example. *C. decepta* is closely allied to *C. nigricornis* and *C. zunilensis*, but differs from both in its very differently formed last ventral segment in the male; it is also narrower than *C. nigricornis*, and has longer tarsi.

6. **Cistela chiriquensis.** (Tab. XX. figg. 24, 24 *a*, ♂.)

Ovate, rather broad, moderately convex, piceous- or reddish-brown, scarcely shining, thickly pubescent. Head finely and somewhat closely punctured; eyes (♂) rather large, a little smaller and more widely separated in the female; antennæ—(♂) moderately long, joint 3 short, only a little longer than 2, joints 4–10 broad and strongly serrate within, (♀) shorter, joint 3 much longer (though not nearly so long as 4) and more slender, joints 4–10 narrower, 9 and 10 triangular and wider than the others—varying in colour from brownish-piceous with the basal joints lighter, to ferruginous with the apical three joints piceous; prothorax short, strongly transverse, the sides rounded and converging from a little before the base, the hind angles subrectangular, the basal foveæ small but distinct, the surface closely and finely punctured; scutellum closely and finely punctured; elytra comparatively rather short, a little rounded at the sides, widest at the middle, rather coarsely punctate-striate, the punctures closely placed, the interstices feebly convex and closely and very finely punctured; beneath more shining, sparsely and finely punctured, the metasternum and ventral surface more closely so in the middle, the former with coarse impressions, and the latter longitudinally wrinkled, at the sides; prosternum narrow; legs fusco-ferruginous.

♂. Anterior and intermediate tarsi dilated, the first joint of the anterior pair strongly so. The lateral lobes of the last ventral segment stout and very widely separated at the base, twisted and very abruptly constricted about the middle, the narrower apical portions obliquely converging, the latter roughened and

armed with scattered irregular teeth within; the central sheath broad, abruptly narrowed towards the apex, the latter strongly hooked above. (Fig. 24 *a*.)

Length 7–8 millim.; breadth $3\frac{1}{2}$–4 millim. (♂ ♀.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

One female and four male examples. This species differs from *C. nigricornis* in the antennæ in the male being more strongly serrate, and in the more coarsely punctate-striate elytra; the armature of the male is totally different in structure, and the tarsi of the anterior and intermediate legs are dilated in this sex.

7. **Cistela delitescens.** (Tab. XX. figg. 25, 25 *a*.)

Oblong ovate, moderately convex, piceous-brown, opaque, thickly clothed with short pubescence. Head finely and sparsely punctured; eyes comparatively large in the male, smaller and more widely separated in the female; antennæ in the male reaching to the middle of the elytra, and with joints 4–10 moderately serrate within, in the female slender and rather shorter, and with joints 4–10 only a little widened towards their apex, fusco-ferruginous, the third joint short, and only a little more than half the length of the fourth in either sex; prothorax transverse, the sides rounded and converging from a little before the base, the hind angles subrectangular, the basal foveæ feebly indicated, the disc shallowly impressed in the middle behind, the surface very finely and somewhat closely punctured; scutellum finely and closely punctured; elytra a little rounded at the sides, very finely and shallowly punctate-striate, the interstices almost flat and very minutely and somewhat closely punctured; beneath finely and rather closely punctured, the metasternum more coarsely so; anterior and intermediate coxæ narrowly separated; metasternum rather short; legs long and slender, stouter in the male, fusco-ferruginous; the first joint of the hind tarsi long, about the length of the following joints united.

♂. Anterior tarsi with the three basal joints and the intermediate tarsi with the first joint dilated, the first joint of the anterior pair very broadly so; intermediate tibiæ curved. Fifth ventral segment slightly emarginate in the middle. The lateral lobes of the last ventral segment broad at the base, very abruptly constricted about the middle, the narrower apical portion long and bent abruptly inwards (forming a strong hook), the latter clothed with coarse hairs; the central sheath broad, acuminate towards the apex, the latter slightly hooked. (Figg. 25, 25 *a*.)

Length $5\frac{2}{3}$–$6\frac{1}{2}$ millim.; breadth $2\frac{1}{2}$–3 millim. (♂ ♀.)

Hab. Guatemala, Dueñas 5000 feet (*Champion*).

Six examples. This and the following species have the anterior tarsi in the male strongly dilated. Both are distinguished from *C. chiriquensis* by their duller surface and much more finely punctured elytral striæ; the œdeagus of *C. delitescens* closely resembles that of *C. chiriquensis*.

8. **Cistela occulta.** (Tab. XX. figg. 26, 26 *a*, ♂.)

Closely resembling *C. delitescens* and differing as follows:—Fusco-ferruginous; the eyes larger and more narrowly separated; the antennæ (♂) much longer (reaching beyond the middle of the elytra), joint 3 short, only a little longer than 2, and about one third of the length of 4, joints 4–10 much more elongate and more strongly serrate, ferruginous; prothorax more densely and less finely punctured, the disc deeply canaliculate behind; elytra less opaque, more deeply and more coarsely punctate-striate, the interstices rather more convex and more distinctly punctured; legs ferruginous; the rest as in *C. delitescens*.

♂. Tarsi and tibiæ formed as in *C. delitescens*. Fifth ventral segment slightly emarginate in the middle. The lateral lobes of the last ventral segment widely separated at the base, simply curved, clothed with scattered hairs; the central sheath broad, the apical portion acutely elongate-triangular in shape, but with the apex rounded. (Fig. 26 *a*.)

Length $6\frac{1}{3}$ millim.; breadth $2\frac{2}{3}$ millim. (♂.)

Hab. GUATEMALA, Las Mercedes 3000 feet (*Champion*).

One male example only, differing as above from the corresponding sex of *C. delitescens*.

9. **Cistela juquilæ.**

Oblong ovate, rather depressed, piceous-brown, opaque, thickly pubescent. Head finely and rather sparsely punctured; eyes (♀) rather small, widely separated; antennæ (♀) ferruginous, moderately long, joint 3 about twice as long as 2, and much shorter than 4, joints 4–10 narrowly elongate-triangular; prothorax moderately transverse, the sides parallel behind and rounded and narrowing from about the basal third, the hind angles subrectangular, the basal foveæ very shallow, the surface finely and somewhat densely punctured; elytra a little rounded at the sides, finely and very shallowly punctate-striate throughout, the interstices flat and closely and minutely punctured, the humeri very little rounded; beneath finely and rather sparsely punctured; legs ferruginous, the tarsi rather stout.

Length 8 millim.; breadth $3\frac{3}{4}$ millim. (♀.)

Hab. MEXICO, Juquila (*Sallé*).

Two female examples. This insect closely resembles *C. decepta*, but differs from it in the thorax being less transverse, with the sides more parallel behind and the disc less densely punctured, and the elytra more depressed and with less rounded humeri. From the corresponding sex of *C. delitescens* its larger size and stouter limbs sufficiently distinguish it. I include *C. juquilæ* provisionally in this section of the genus, it having considerable affinity in many of its characters with *C. delitescens*.

10. **Cistela alternans.** (Tab. XXI. fig. 1, ♂.)

Oblong ovate, depressed, obscure reddish-testaceous, subopaque, sparsely clothed with short pubescence. Head very finely and sparsely punctured; eyes (♂) rather small; antennæ (♂) reaching to the middle of the elytra, rather stout and gradually widening outwardly, joint 3 shorter than 4, joints 4–10 long and subtriangular, testaceous, the last three or four joints darker; prothorax short, transverse, the sides rounded and converging from a little before the base, the hind angles obtuse, the basal foveæ rather deep, the surface very finely and rather closely punctured, the anterior half of the disc more sparsely so, the disc somewhat flattened, and broadly suffused with fusco-piceous; scutellum very finely and closely punctured; elytra subparallel in their basal half, rounded at the shoulders, finely and shallowly punctate-striate, the interstices quite flat and thickly punctured, the alternate ones fusco-piceous; beneath finely and rather closely punctured, the sides of the metasternum coarsely and sparsely punctured in front and smooth behind, the venter darker at the sides; anterior and intermediate coxæ narrowly separated; metasternum moderately long; legs testaceous, long and slender.

♂. Anterior and intermediate tarsi slightly dilated, the first joint of the anterior pair rather broadly so. The lateral lobes of the last ventral segment curved, their apices bluntly rounded off and clothed with longish hairs.

Length $6\frac{1}{2}$ millim.; breadth $2\frac{2}{3}$ millim. (♂.)

Hab. MEXICO, Yolotepec (*Sallé*).

A single male example. This species departs widely from the allied forms in the system of coloration of the elytra, the alternate interstices being of a darker colour than the others.

2. *Antennæ* (♀) *very long and slender, subfiliform; species large.*

11. **Cistela fragilicornis.** (Tab. XXI. fig. 2, ♀.)

Oblong ovate, rather broad, depressed, brownish-piceous with an æneous tint, scarcely shining, thickly clothed with short pubescence. Head very finely and closely punctured, with a deep frontal depression; eyes (♀) rather small; antennæ (♀) long and very slender, reaching to about the middle of the elytra, the joints very long and subfiliform and but little widened towards their apex, the third joint shorter than the fourth, fusco-testaceous; prothorax transverse, the sides converging from the base, the hind angles subrectangular, the disc very distinctly canaliculate (more deeply so behind) and with an oblique foveate impression on each side (sometimes connected by a shallow transverse groove) a little behind the middle, the basal foveæ deep and usually connected by a very narrow deep groove running along the basal margin, the space in front of the basal groove transversely raised, the surface minutely and densely punctured; scutellum finely and closely punctured; elytra long, a little rounded and acutely margined at the sides, very shallowly and minutely punctate-striate from the base to the apex, the interstices almost flat and densely and minutely punctured, the surface less dull and of a more æneous tint than that of the prothorax: beneath finely and densely punctured, the metasternum more sparsely and more coarsely so at the sides; anterior and intermediate coxæ narrowly separated; legs long and slender, the tarsi comparatively very long, brownish-piceous, the tarsi more or less ferruginous.

Length $11\frac{1}{2}$–$12\frac{1}{3}$ millim.; breadth $4\frac{1}{2}$–5 millim. (♀.)

Hab. Guatemala, Calderas 6000 to 7000 feet (*Champion*).

Six examples, all females. This is the largest species of this group inhabiting the Central-American region. As will be seen from the above description, *C. fragilicornis* is very distinct from any other species here enumerated. The antennæ are long, slender, and subfiliform; they are possibly still longer in the male.

I met with this species only on the slopes of the Volcan de Fuego.

ISOMIRA.

Isomira, Mulsant, Hist. Nat. Col. de France, Pectinipèdes, p. 52 (1856); Lacordaire, Gen. Col. v. p. 506 (1859).

The Central-American species referred to this genus agree in having the antennæ slender, moderately long, and the third joint fully as long as the fourth in both sexes, and the penultimate joint of the tarsi not lobed beneath; the males have a simple (but hidden) sixth ventral segment, the sides of which are not lobed. The few species described are from Europe, Morocco, and North America. In Central America the genus is not known to me from south of Guatemala.

1. **Isomira obsoleta.** (Tab. XXI. fig. 3, ♂.)

Oblong ovate, rather broad and convex, obscure reddish- or piceous-brown with a slight æneous tinge, densely clothed with short fulvous pubescence, scarcely shining. Head closely and finely punctured; eyes moderately large; antennæ slender and subfiliform in both sexes, in the male reaching to about the first third of the elytra, the third and fourth joints long and about equal in length, ferruginous; prothorax twice as broad as long at the base, the sides rounded and rapidly converging from the rather obtuse hind angles, the basal foveæ scarcely indicated, the disc feebly impressed in the middle behind, the surface finely, densely, and equally punctured; scutellum closely and finely punctured; elytra rather long, the sides

rounded and forming a continuous outline with the prothorax, finely, densely, and confusedly punctured, with rows of very fine punctures towards the base only, the punctures scarcely distinguishable from those of the interstices, the latter perfectly flat; beneath and the epipleuræ finely and closely punctured, the metasternum coarsely and sparsely so; prosternum rather broad and convex between the coxæ; mesosternum feebly convex, rounded off in front; legs long and slender, fusco-ferruginous, the tibiæ similar in both sexes; the first joint of the hind tarsi shorter than the following joints united.

♂. Abdomen with a short (but hidden) sixth ventral segment, the segment without lateral lobes; the central sheath stout, gradually acuminate towards the apex, the pieces on either side very short.

Length $7\frac{1}{2}$–9 millim.; breadth $3\frac{2}{3}$–$4\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Oaxaca (*Sallé*), Cerro de Plumas, Almolonga, Chilpancingo, Vera Cruz (*Höge*); Guatemala, Zapote (*Champion*).

Numerous examples from Zapote, one or two only from each of the other localities. This species may be identified by the confused punctuation of the elytra; in two of the Mexican examples the upper surface is rather more densely punctured and in consequence duller. The North-American *I. valida* is apparently an ally of this insect.

2. **Isomira subænea.** (Tab. XXI. fig. 4.)

Oblong ovate, rather depressed, brownish-piceous with an æneous tint, slightly shining, clothed with short pubescence. Head closely and somewhat coarsely punctured, with the transverse frontal groove deep; eyes rather small; antennæ fusco-ferruginous, rather slender in both sexes, reaching in the male nearly to the middle, in the female to the first third, of the elytra, joints 3 and 4 equal in length, 4–10 a little widened towards their apex and with their inner apical angle rounded in both sexes; prothorax short, strongly transverse, the sides converging from a little before the base and somewhat rounded behind, the hind angles obtuse, the basal foveæ very shallow, the disc with traces of a smooth central slightly impressed line, the base feebly bisinuate, the surface very closely and finely punctured; scutellum closely and finely punctured; elytra widest a little beyond the middle, with rows of very fine oblong punctures which in the apical third are confused with and indistinguishable from those of the interstices, the latter quite flat and closely and finely punctured; beneath closely and finely punctured, the metasternum more sparsely and more coarsely so; prosternum narrow; legs long and slender, fusco-ferruginous, the tarsi similar in both sexes.

♂. Abdomen with a short but hidden sixth ventral segment, the segment without lateral lobes; the central sheath stout, laterally compressed, the pieces on either side of it stout and rounded off in front.

Length $6\frac{2}{3}$–$8\frac{1}{2}$ millim.; breadth 3–$3\frac{2}{3}$ millim.

Hab. Mexico, Ostuncalco 7500 feet, Totonicapam 9000 feet (*Champion*).

Three examples, captured in the elevated Los Altos region of Guatemala. Resembles *Cistela fragilicornis*, but smaller, the thorax rounded at the sides behind (not converging from the extreme base), the elytra (as in *I. obsoleta*) merely with rows of very fine punctures from the base to a little beyond the middle, the antennæ with much less elongate joints, &c. The single male example (from Totonicapam) is much smaller than the others.

3. **Isomira evanescens.**

Oblong ovate, feebly convex, reddish- or piceous-brown, slightly shining, the elytra with a very slight æneous tinge, thickly pubescent. Head closely and finely punctured; eyes rather small, more widely separated in the female; antennæ comparatively short, slender, and similar in both sexes, not reaching to the

middle of the elytra, the joints widening a little towards their apex and with their inner apical angle rounded, the third and fourth equal in length, ferruginous; prothorax strongly transverse, the sides rounded and narrowing from a little before the base, the hind angles obtuse, the basal foveæ small and shallow, the surface finely and densely punctured; scutellum closely and finely punctured; elytra moderately long, widest about the middle, the sides very little rounded, finely and lightly punctate-striate, the punctures becoming coarser towards the sides and finer and shallower beyond the middle, the interstices flat and closely and finely punctured; beneath finely and closely punctured; legs slender, ferruginous, the tarsi similar in both sexes.

♂. Abdomen with a short but hidden sixth ventral segment, the segment without lateral lobes; the central sheath laterally compressed.

Length $6\frac{1}{2}$–$7\frac{1}{2}$ millim.; breadth $2\frac{3}{4}$–$3\frac{1}{3}$ millim. (♂ ♀.)

Hab. Guatemala, San Gerónimo, Dueñas (*Champion*).

Seven examples. Smaller and more parallel than *I. obsoleta*, the sides of the thorax a little rounded at the extreme base, the elytra with distinct rows of punctures in their basal half, the joints of the antennæ shorter and less filiform and the prosternum narrower; as in *I. obsoleta*, the antennæ and tarsi are similarly formed in both sexes.

4. Isomira brevicollis.

Oblong ovate, rather depressed, piceous-brown, slightly shining, thickly pubescent. Head finely and closely punctured; eyes small; antennæ piceous, ferruginous towards the base, formed as in *I. evanescens*; prothorax very short, nearly twice as broad as long, the sides narrowed from a little before the base, the hind angles obtuse, the basal foveæ small and shallow, the surface finely and densely punctured; elytra very closely and finely punctured, with rows of very fine punctures, the punctures scarcely finer than and almost indistinguishable from those of the interstices; beneath finely and closely punctured, the metasternum more sparsely and coarsely so; the rest as in *I. evanescens*.

Length $6\frac{1}{4}$ millim.; breadth 3 millim. (♀.)

Hab. Mexico, Jalapa (*Höge*).

Though we have but a single female example of this insect I am compelled to treat it as distinct from *I. evanescens*; the elytra are confusedly punctured, the rows of punctures being scarcely visible (in *I. evanescens*, though fine, they are very distinct in the basal half); and the thorax is rather more rounded at the sides behind and still more strongly transverse.

5. Isomira (?) ——?

Hab. Mexico (*Sallé, ex coll. Sturm*).

A single immature male, too mutilated to describe, of a species perfectly distinct from any other noticed here, and labelled *Cistela badia*, Sturm, in the Sallé collection. This insect is of elongate-ovate shape, rather depressed, with a finely and densely punctured thorax, very closely and confusedly punctured and shallowly striate elytra (the punctures of the striæ not distinguishable from those of the interstices), long and slender antennæ with the third joint as long as the fourth, and long and slender legs.

ERXIAS.

Last joint of the maxillary palpi long and moderately broad, its outer side much longer than the apical side, the inner apical angle somewhat rounded; last joint of the labial palpi broad ovate, the apex truncate; mentum trapezoidal, large, not much broader than long; ligula large and prominent; mandibles long, feebly cleft at the apex; labrum very large and prominent, connected with the epistoma by a broad membranous space; head long and narrow, subrostrate, strongly exserted, the sides obliquely converging in front, the epistoma long and separated by a shallow groove; eyes small, widely separated, distant from the prothorax; antennæ (♀) very stout, the joints cylindrical, 3 longer than 4, 5–11 as wide at the base as at the apex, 9–11 rather more slender, 11 about one third longer than 10 and somewhat pointed; prothorax broader than long, moderately convex, very sharply margined at the sides and base, the sides much rounded anteriorly and straight (though slightly converging) behind, the hind angles acute, the base broadly rounded in the middle, the median portion a little produced, the basal foveæ small and oblique; scutellum large, scutiform; elytra moderately long, broad, fully one half wider than the prothorax at the base, widest beyond the middle, the intrahumeral depression deep, the humeri rounded, the surface finely punctate-striate; abdomen with five visible segments; coxæ rather widely separated; intercoxal process short, very broadly triangular; legs moderately long and stout, the tarsi not lobed beneath; claws pectinate; body winged, obovate, rather convex, broad, clothed with long, widely scattered, suberect hairs.

This interesting new genus departs widely from any yet described; it has the intercoxal process of the abdomen very broad and accordingly belongs to the "Lystronychides" as defined by Lacordaire. In the subrostrate form of the head it approaches certain Central-African forms, though differing widely in other respects. The two species referred to it, one from Nicaragua and one from the State of Panama, are closely allied; both are bright reddish-testaceous in colour, with the elytra, antennæ, palpi, and legs (except rather more than the basal half of the femora) violaceous or cyaneous, and the upper and under surfaces more or less shining. Our examples of both species are females.

1. **Erxias violaceipennis.** (Tab. XXI. figg. 5, ♀; 5 *a*, labium; 5 *b*, maxilla and maxillary palpus.)

Bright reddish-testaceous, shining, the palpi, antennæ, and legs (except rather more than the basal half of the femora) dark cyaneous, the elytra and epipleuræ violaceous or bluish-violaceous and duller. Head sparsely, very irregularly, and coarsely punctured, the epistoma more finely so, a narrow transverse space on the vertex impunctate; prothorax with widely scattered, irregularly arranged, coarse and fine punctures, the coarse punctures each bearing a long erect hair, the short basal foveæ connected by a deep groove running along the base, the disc very shallowly impressed in the middle behind; scutellum with a few fine scattered punctures; elytra finely and lightly punctate-striate throughout, the punctures closely placed, the interstices quite flat and irregularly and thickly punctured (the punctures as coarse as those of the striæ and towards the sides confused with them) and each with a row of distantly placed coarser setiferous impressions; beneath with a few minute very widely scattered punctures and here and there a coarser setiferous one, the venter with shallow longitudinal wrinkles.

Length 12–13 millim.; breadth 5½ millim. (♀.)

Hab. NICARAGUA, Chontales (*Belt*, *Janson*).

Two female examples.

2. **Erxias bicolor.**

Closely allied to *E. violaceipennis*, and differing as follows:—The head still more irregularly punctured; the

elytra relatively shorter, shining, cyaneous in tint, and more finely and much more sparsely punctured; the rest as in *E. violaceipennis*.

Length 11 millim.; breadth $5\frac{1}{4}$–$5\frac{1}{2}$ millim. (♀.)

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Two female examples. This insect apparently replaces *E. violaceipennis* in the State of Panama; but, on account of the above differences, I am unable to treat it as a variety or local form of that species.

PROSTENUS.

Prostenus, Latreille, Fam. nat. du Règne anim. p. 377 (1825); Lacordaire, Gen. Col. v. p. 513 (1859).

Xystropus, sect. *Mecocerus*, Solier, Ann. Soc. Ent. Fr. iv. p. 241 (1835).

This interesting genus contains a number of species in Tropical and Subtropical South America, very few of which have been described as yet; one inhabits the southern portion of our region. The antennæ have their outer joints very large and much flattened, often foliaceous or exceedingly broad; the femora are clavate towards the apex; and the intercoxal process is very broad. The thorax varies in shape in the different species from transverse to as long as broad.

1. **Prostenus panamensis.** (Tab. XXI. fig. 6, ♂.)

Elongate, rather convex, piceous-brown with a bronzy tint, the upper surface opaque, more or less olivaceous, and clothed with long and erect scattered hairs, and also somewhat thickly pubescent. Head coarsely and rugosely punctured; eyes transverse, convex, and widely separated; antennæ metallic violaceous or cupreo-violaceous, very stout, much flattened, and very rapidly widening outwardly in both sexes, in the male reaching far beyond the middle of the elytra, in the female shorter, joints 3 and 4 subequal, 8–10 exceedingly large and broad, equal in length, and each much widened towards their apex, 11 very much longer than 10; prothorax fully as long as broad, very convex, the sides a little narrowed and sinuate behind and feebly rounded in front, the hind angles rather sharp, the base slightly rounded, the basal foveæ obsolete, the surface very densely and rugosely punctured; scutellum with a few scattered punctures, rather shining; elytra rather long, parallel in their basal half, very much broader than the prothorax, rather convex but flattened on the disc, with rows of moderately fine, very deep punctures, which beyond the middle rapidly become very much finer and shallower, the interstices perfectly flat, very minutely punctured, and each with a row of very widely separated coarser punctures, the latter each bearing a long, erect hair; beneath a little more shining, dark bronze, finely and rather sparsely punctured, the last ventral segment more closely so; legs dark bronze, with a slight violaceous tinge, long, the femora clavate in their outer half.

Length 8–9 millim.; breadth $2\frac{1}{2}$–3 millim. (♂ ♀.)

Hab. Panama, Bugaba 1000 feet (*Champion*).

Five examples. This elegant insect is allied to one or two undescribed species from the Amazons.

LYSTRONYCHUS.

Lystronichus, Latreille, Règne anim. 2nd edit. v. p. 41 (1829).
Lystronychus, Lacordaire, Gen. Col. v. p. 514 (1859).
Xystronia, Solier, Ann. Soc. Ent. Fr. iv. p. 238 (1835).

About twelve species of this genus have been described, though many others exist in collections. The three species here enumerated each have the antennæ of a somewhat different structure; they agree, however, well enough in other respects. *Lystronychus* is chiefly confined to Tropical America; two species are known to me from Texas, and *Prostenus californicus*, Horn, doubtless belongs to it. *L. scapularis* somewhat approaches *Prostenus* in the structure of the antennæ, but differs in the non-clavate femora.

1. *Antennæ very long, slender, and filiform; upper surface unicolorous, opaque.*

1. **Lystronychus piliferus.** (Tab. XXI. fig. 7.)

Oblong ovate, feebly convex, obscure reddish-brown, opaque, above usually of a pruinose bluish-violet, obscure purplish, or greenish-bronzy tint, the surface somewhat thickly clothed with long erect hairs, and also sparsely pubescent. Head closely and coarsely punctured; eyes rather large; antennæ filiform, very long and slender, in the male reaching far beyond the middle of the elytra, joints 3 and 4 long, about equal, 5–11 increasing a little in length, varying in colour from ferruginous to piceous; prothorax not much broader than long, the sides dilated at the middle, constricted behind, and rounded and a little more narrowed in front, the hind angles somewhat prominent, the base subtruncate (or very slightly rounded) and very feebly margined, the basal foveæ indistinct or obsolete, the disc unimpressed, the surface finely and very densely punctured; scutellum closely and finely punctured; elytra moderately long, with rows of very minute punctures placed upon obsolete striæ, the interstices flat and each with a row of scattered coarser punctures, the punctures bearing long erect hairs; beneath more shining, the ventral surface somewhat closely and finely, the metasternum sparsely and more coarsely, punctured; legs long and slender, clothed with short bristly hairs, piceous or ferruginous, the basal half of the femora often testaceous, the femora not swollen towards the apex, the basal joint of the hind tarsi long.

Length 6–8⅓ millim.; breadth 2–3½ millim. (♂ ♀.)

Hab. North America, Texas (*coll. Dr. Horn*).—Mexico (*coll. F. Bates*), Matamoros Izucar, Colima city, Oaxaca, Tapachula in Chiapas (*Höge*), Tepansacualco, Cordova (*Sallé*); Guatemala, San Juan in Vera Paz, Tocoy, El Jicaro, San Gerónimo (*Champion*), Chinautla (*Salvin*); Nicaragua, Choutales (*Belt, Janson*).—Colombia, Bogota; Brazil.

A widely distributed and not uncommon species in Central America, extending northwards to Texas and southwards to Brazil. An example from Mexico in Mr. F. Bates's collection from that of Dejean is labelled "Gen. nov. *piliferum*," and another from Colombia "*geniculatus*, Reiche." This insect bears a rather different facies to the typical *Lystronychi*, *L. equestris*, *L. pulchellus*, &c., on account of the still longer and more filiform antennæ, larger eyes, and more depressed form. The basal half of the femora is frequently testaceous, about half the large number of specimens before me being thus coloured. Dark-coloured individuals have the upper surface of

a pruinose or iridescent bluish-violet tint. The example from Texas has been kindly communicated by Dr. Horn.

Allied species are found in Tropical South America and southwards to Parana.

2. *Antennæ shorter and stouter, subfiliform; head and thorax dull cyaneous, the elytra metallic cupreous.*

2. **Lystronychus purpureipennis.** (Tab. XXI. fig. 8.)

Oblong ovate, rather convex, dull cyaneous with an æneous tinge, the elytra shining and of a rich metallic purplish-cupreous tint, the surface clothed with long and erect scattered hairs. Head coarsely and densely punctured; eyes small; antennæ cyaneous, rather short and stout, not reaching to the middle of the elytra, subfiliform, joints 3 and 4 equal, 5–11 longer than broad, and increasing a little in length outwardly, 11 much longer than 10; prothorax transverse, moderately convex, the sides dilated at the middle, constricted behind, and rounded and about equally narrowed in front, the hind angles rather sharp, the basal foveæ obsolete, the surface punctured like that of the head; scutellum transverse, with scattered punctures, cyaneous, shining; elytra moderately long, subparallel in their basal half, with rows of moderately fine, deep, closely placed punctures, the interstices quite flat, and each with a row of more scattered punctures, the alternate punctures coarser and bearing a long erect hair, the punctures on the sutural interstice more irregular; beneath shining, dark cyaneous, closely punctured; legs dark cyaneous, setose, the claws ferruginous.

Length $6\frac{1}{4}$ millim.; breadth $2\frac{1}{2}$ millim.

Hab. Guatemala, Teleman (*Champion*).

A single example, apparently a male, captured by myself in the lower part of the Polochic valley.

A species distinguished by its coarsely punctured dull cyaneous head and thorax, cyaneous scutellum, and purplish-cupreous shining elytra. In colour this insect resembles *L.* (*Xystronia*) *cupripennis*, Lac., from Matto Grosso; but it has the thorax transverse (not so long as broad), and, moreover, is only about half the size of that species.

3. *Antennæ stout, with dilated serrate joints in the male; upper surface opaque, black, the elytra with a red humeral spot.*

3. **Lystronychus scapularis.** (Tab. XXI. fig. 9, ♂.)

Moderately elongate, rather convex, black or piceous, sometimes with a bluish tinge, the elytra each with a red humeral patch, above very dull and opaque, the surface clothed with long and erect scattered hairs. Head short, coarsely and very rugosely punctured; eyes large, rather narrowly separated in the male, more distant in the female; antennæ dark cyaneous or bluish-black, stout, in the male about reaching to the middle of the elytra, joint 3 much shorter and smaller than 4, joints 4–10 long and wide, flattened, and serrate within, and 11 much longer than 10—in the female shorter, and with joints 4–10 less widened; prothorax transversely convex, much broader than long, the sides strongly and abruptly constricted behind, broadly dilated at the middle, and there armed with two or three strong teeth, and rounded and narrowing in front, the hind angles acute, the base with a broad rounded median lobe, the basal foveæ obsolete, the surface coarsely and very densely punctured; scutellum transverse, sparsely punctured; elytra moderately long, with rows of fine but deep approximate punctures, the interstices quite flat, and each with a row of minute punctures, amongst which are scattered other coarser

setiferous ones; beneath shining, sparsely punctured; legs black or piceous, the basal half of the femora sometimes red, sparsely setose, moderately long.
Length $5\frac{1}{2}$–8 millim.; breadth 2–$3\frac{1}{4}$ millim. (♂ ♀.)

Hab. Mexico, Temax in N. Yucatan (*Gaumer*); Guatemala, Zapote, Las Mercedes (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*); Panama, Bugaba, Tolé (*Champion*).

Numerous examples. This species resembles the Colombian *L. denticollis*, Mäkl., in the shape of the thorax and other particulars, but has the joints 4–11 of the antennæ in the male widened and flattened; in the last-named character *L. scapularis* approaches the genus *Prostenus*. The elytra are coloured as in the undescribed *L. humeralis* of South America.

XYSTROPUS.

Xystropus, Solier, Ann. Soc. Ent. Fr. iv. p. 241 (1835); Lacordaire, Gen. Col. v. p. 515 (1859).

This genus is peculiar to Tropical America. Thirteen species have been described, and numerous others are enumerated in Gemminger and Harold's catalogue; three of the former extend northwards into the Central-American region. These insects are found upon bushes on the savannas of the low country, and are usually common where they occur.

1. *Upper surface more or less cupreous, coarsely punctured.*

1. **Xystropus fulgidus.** (Tab. XXI. fig. 10.)

Prostenus fulgidus, Dej. in litt.
Xystropus fulgidus, Mäkl. Act. Soc. Fenn. x. p. 680[1].

Hab. Mexico, Tehuantepec (*Sallé*); Nicaragua, Chontales (*Janson*, *Belt*); Panama, Bugaba, Volcan de Chiriqui, David, Caldera, San Feliz, San Lorenzo, Los Remedios, Tolé (*Champion*).—Colombia[1] (*coll. F. Bates*).

This insect is abundant in the State of Panama. It varies in colour from a bright metallic golden-green with cupreous tints to fiery cupreous, and in length from 8–10 millim. The Mexican locality requires verification.

2. *Upper surface of a brassy tint, finely punctured.*

2. **Xystropus fallax.** (Tab. XXI. fig. 11.)

Prostenus æquinoctialis, Dej. Cat. 3rd edit. p. 234[1].
Xystropus fallax (Dej.), Mäkl. Act. Soc. Fenn. x. p. 677[2].

Hab. Panama, Bugaba, David, Caldera, San Feliz (*Champion*).—Colombia[1 2] (*coll. F. Bates*).

Found in Chiriqui in company with *X. lebasii*, but in smaller numbers. According to an example in Mr. F. Bates's collection from that of Dejean, *Prostenus æquinoctialis*

is synonymous with *X. fallax*, Mäkl. Numerous allied forms, undescribed as yet, are known from South America.

3. **Xystropus lebasi.** (Tab. XXI. fig. 12.)

Prostenus lebasii, Dej. Cat. 3rd edit. p. 234[1].
Xystropus lebasii, Mäkl. Act. Soc. Fenn. x. p. 679[2].

Hab. PANAMA, Bugaba, Volcan de Chiriqui, David, Caldera, Tolé (*Champion*).—COLOMBIA, Cartagena[1 2] (*coll. F. Bates*).

Found in abundance in Chiriqui in company with *X. fulgidus* and *X. fallax*. Chiriqui examples agree perfectly with an individual from Cartagena in Mr. F. Bates's collection. This species is readily separated from *X. fallax* by its smaller size and posteriorly constricted thorax.

CTEISA.

Cteisa, Solier, Ann. Soc. Ent. Fr. iv. p. 242 (1835); Lacordaire, Gen. Col. v. p. 516 (1859).

This Tropical-American genus contains three or four closely allied species; two only have been described as yet, one of which extends northwards to the State of Panama. The three other species enumerated in Gemminger and Harold's catalogue are doubtfully distinct from these.

1. **Cteisa pedinoides.** (Tab. XXI. fig. 13.)

Cteisa pedinoides (Dej.), Mäkl. Act. Soc. Fenn. x. p. 681[1].

Hab. PANAMA, Bugaba, Volcan de Chiriqui, Caldera, David, Tolé (*Champion*).—COLOMBIA[1]; VENEZUELA, Cumana.

Found in plenty by myself in Chiriqui, chiefly in the savanna region of the low country. Mäklin's description appears to have been made from an abraded example. *C. pedinoides* is closely allied to the Brazilian *C. hirta*, Sol.; it differs in its smaller size, shorter antennæ, and in the sides of the thorax being rather straighter behind. The anterior tibiæ are slightly dilated on the inner side about the middle in the male. The pubescence and sculpture of the upper surface is similar to that of *C. hirta*.

Fam. OTHNIIDÆ.

The single known genus of this family was placed by Pascoe in the Melandryidæ, and by Leconte (Class. Col. N. A. p. 102) as a separate family in the Clavicorn-series near the Cryptophagidæ. Leconte and Horn, however, in the second edition of the 'Classification of the Coleoptera of North America' (p. 391), place the Othniidæ in the Heteromerous-series immediately after the Cistelidæ.

OTHNIUS *.

Elacatis, Pascoe, Journ. Ent. i. p. 52 (1860); Gemminger & Harold, Cat. iii. p. 905.
Othnius, Leconte, Class. Col. N. Am. p. 103 (1861); Horn, Trans. Am. Ent. Soc. 1868, p. 132, and 1871, p. 333; Leconte & Horn, Class. Col. N. Am. p. 391 (1883); Horn, Trans. Am. Ent. Soc. 1888, p. 27, t. 3. figg. 24, *a*, *b*, *c*; Gemminger & Harold, Cat. Col. vii. p. 2063.

Eight species of *Othnius* have been described, and these show a very remarkable distribution, three being from the Eastern Archipelago † (Borneo, Ceylon, Batchian, and New Guinea), four from North America, and one from Mexico; six are now known from Central America, the genus ranging throughout our region. *Othnius* is not closely allied to any known genus, and is very easily recognized by its prominent eyes and general facies (resembling various Cleridæ); the tarsi are all heteromerous in both sexes. In all the Central-American species the elytra are intricately and more or less distinctly spotted or marked with testaceous (their general pattern will be best understood from our figures); and the antennæ have the last three joints widened and forming a very distinct club (the N.-American *O. longicornis* is described as having the three outer joints very feebly clavate in the male only), the ninth joint in the male of one of our species, *O. antennalis*, being obliquely produced within. Dr. Horn (Trans. Am. Ent. Soc. 1888, p. 28, t. 3. fig. 24, *b*) states that the males may be distinguished by the mentum having a foveate hairy depression on each side of the middle. This character I do not find of much value in separating the sexes of the Central-American species, the females of the two examined (*O. mexicanus* and *O. sticticopterus*) also having the mentum shallowly foveate on each side; the last-mentioned sex may, however, be distinguished by the elytra having a common sutural oblong depression (very distinct in *O. mexicanus*, Horn) at a little distance before the apex, the depression being absent in the male. The different species are found upon herbage, and are very active; one has been found under decomposing *Opuntia*-leaves and another in the withered stems of *Senecio*; they are doubtless of predatory habits.

The following table will assist in the identification of the Central-American species:—

Antennæ short, not or scarcely reaching the base of the prothorax.
- Head and prothorax opaque, densely rugose, and clothed with appressed hairs . . . . . *senecionis.*
- Head and prothorax shining, closely and coarsely punctured, sparsely pubescent . . . . . *antennalis.*

* The name *Othnius* is here adopted in preference to *Elacatis* for this genus, as the author of the latter suggests (Ann. & Mag. Nat. Hist. ser. 4, viii. p. 347) that the name Othniidæ should be retained for the family; moreover, there is a prior *Elacate* already in use in Zoology (Cuvier, 1829).

† Mr. Pascoe has kindly lent me one of these for comparison with the American forms, with which it seems to be absolutely congeneric.

Antennæ moderately long, at least reaching to the base of the prothorax.
- Head and prothorax very closely and coarsely punctured.
  - Antennæ with joints 9 and 10 transverse; elytra with numerous fusco-testaceous spots and angular markings . . . . . *multiguttatus.*
  - Antennæ with joints 9 and 10 as long as broad; elytra with markings more indistinct, and in the form of narrow zigzag fasciæ . . . . . *intricatus.*
- Head and prothorax sparsely and coarsely punctured.
  - Elytra with a broad angulated band behind the middle, a small spot on either side of the suture before the apex, and some other markings towards the base, testaceous . . . . . *mexicanus.*
  - Elytra with a broad angulated band before the middle, another (but narrower) one behind the middle, and the apex, testaceous *sticticopterus.*

1. **Othnius senecionis.** (Tab. XXI. fig. 14.)

Blackish-brown, opaque, the elytra slightly shining, the head and prothorax densely clothed with short appressed hairs, the elytra with longer and more scattered decumbent ashy hairs. Head very densely and rugosely punctured, the intraocular space convexly raised in the middle, the eyes moderately large; antennæ very short, not reaching the base of the prothorax, joints 9 and 10 strongly transverse, ferruginous, the last three joints a little darker; prothorax very convex, the sides much rounded, about equally narrowing before and behind, and shallowly emarginate behind the middle, the emargination preceded and followed by a short tooth, the hind angles rather acute, the surface very densely and rugosely punctured throughout, velvety-blackish-brown, with a longitudinal stripe on the middle of the disc white; elytra long and convex, subparallel, dark bronze with an irregular network of testaceous markings, densely and not very finely punctured, the punctures coarser towards the base; legs ferruginous.

Length $5\frac{1}{3}$-$5\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, near the city (*Flohr*).

Two examples. This very distinct new species has been kindly forwarded to me by Mr. Flohr, who states that he found it in withered stems of *Senecio*. *O. senecionis* is more convex than any of the other species enumerated here, from which its very short antennæ, rugose and opaque head and thorax, intricate elytral pattern, and other characters mentioned above abundantly distinguish it. The intricate elytral markings will be best understood from our figure.

2. **Othnius antennalis.** (Tab. XXI. figg. 15; 15, *a*, antenna.)

Dark bronze, shining, sparsely clothed with short ashy decumbent hairs. Head closely and coarsely punctured; antennæ testaceous, short, about reaching to the base of the prothorax, joints 9 and 10 very strongly transverse, 9 obliquely produced on its inner side; prothorax moderately transverse, coarsely and closely punctured, the punctures more scattered on the anterior half of the disc, the disc with a narrow ill-defined longitudinal space in the middle impunctate, the sides feebly emarginate before and behind the middle, and with a short tooth before and behind the emarginations, the hind angles rather obtuse; elytra subparallel, rather finely and somewhat thickly punctured, the punctures coarser towards the base, marked thus:—an oblique stripe extending from the shoulders nearly to the suture (separated from a triangular scutellar patch by an oblique stripe of the ground-colour), a common sutural patch about the middle, a zigzag band

behind the middle (not extending to the lateral margin), and the apices, testaceous; legs ferruginous, the middle of the femora a little darker.

Length 4 millim. (♂.)

Hab. Mexico, Jalapa (*Höge*).

One specimen only. This species may be distinguished from *O. mexicanus* and *O. sticticopterus* by the much more thickly punctured head and thorax, different elytral pattern, and the short and peculiarly formed antennæ (fig. 15 *a*); and from *O. multiguttatus* and *O. intricatus* by its more sparsely punctured thorax, different elytral pattern, and short antennæ. The specimen described is a male, the female may possibly have a differently-shaped ninth antennal joint.

3. **Othnius multiguttatus.** (Tab. XXI. fig. 16.)

Dark bronze, shining, sparsely clothed with short ashy decumbent hairs. Head coarsely and very closely punctured; antennæ moderately long, joints 9 and 10 transverse, ferruginous, the last three joints piceous; prothorax transverse, coarsely and closely punctured, a narrow ill-defined longitudinal space on the middle of the disc impunctate, the surface rather uneven and usually with one or two irregular depressions on either side of the disc posteriorly, the sides feebly emarginate before and behind the middle and with a short (sometimes indistinct) tooth before and behind the emarginations, the hind angles distinct; elytra subparallel, sparsely and rather finely punctured, the punctures coarser towards the base, the surface with numerous fusco-testaceous angular markings and irregularly shaped spots; beneath dark bronze, the venter reddish-brown, sparsely punctured, the middle of the metasternum and the ventral surface almost smooth; legs ferruginous, the femora and the middle of the tibiæ sometimes piceous.

Length $3\frac{3}{4}$–$4\frac{1}{2}$ millim. (♂ ♀.)

Hab. Guatemala, Capetillo, Zapote, near the city, Purula (*Champion*).

Many specimens. *O. multiguttatus* is abundantly distinct from all other species of the genus noticed here, as will be seen by a reference to our figure. The suture of the elytra is narrowly longitudinally depressed at a little distance before the apex in the female.

4. **Othnius intricatus.** (Tab. XXI. fig. 17.)

Dark bronze with a slight cupreous tint, slightly shining, sparsely clothed with short ashy decumbent hairs. Head coarsely and densely punctured; antennæ comparatively long and stout, joints 9 and 10 as long as broad, ferruginous, the last three joints a little darker; prothorax not much broader than long, densely and coarsely punctured, the surface rather uneven and with a shallow depression on either side of the disc before and behind the middle, the disc itself also a little depressed before the middle and with a smooth slightly raised line in the centre, the sides very feebly emarginate behind, the hind angles distinct; elytra subparallel, rather closely, shallowly, and finely punctured, the punctures coarser towards the base, the surface lighter in tint than the prothorax, and with the shoulders and numerous indistinct zigzag transverse bands fusco-testaceous, the transverse bands very little lighter than the ground-colour and (as usual) bearing hairs of a more ashy tint than the rest of the surface; legs ferruginous.

Length $4\frac{1}{2}$ millim. (♀.)

Hab. Guatemala, San Gerónimo (*Champion*).

A single example. More elongate and duller than *O. multiguttatus*; the head and

thorax still more densely punctured; the antennæ longer and stouter and with the ninth and tenth joints as long as broad; the elytra longer, and with the markings less distinct and in the shape of narrow zigzag bands. Of the North-American species, it appears to come nearest to *O. umbrosus*, Lec. The suture of the elytra is feebly longi tudinally depressed towards the apex.

5. **Othnius mexicanus.** (Tab. XXI. fig. 18, ♀.)

Othnius mexicanus, Horn, Trans. Am. Ent. Soc. ii. p. 133[1], and v. p. 151; Chevr. Rev. et Mag. Zool. 1874, p. 328[2].

Hab. Mexico[1 2], Cordova, Toxpam (*Sallé*), Jalapa (*Höge*); Guatemala, Chiacam, Senahu, Cerro Zunil (*Champion*); Panama, Peña Blanca (*Champion*).

The numerous specimens before me (two of which have been examined by Dr. Horn) vary a little in the extent of the testaceous markings of the elytra (in one example the zigzag band of the ground-colour is not connected at the suture), but the general pattern is quite constant and all have a small spot on either side of the suture towards the apex. In the female the common sutural foveate depression towards the apex of the elytra is very distinct. *O. mexicanus* varies in length from 4–5½ millim.

6. **Othnius sticticopterus.** (Tab. XXI. fig. 19.)

Dark brownish-bronze, shining, somewhat thickly clothed with short suberect ashy hairs. Head and prothorax sparsely and coarsely punctured; elytra subparallel towards the base, a little rounded about the middle, somewhat closely and not very finely punctured, the punctures coarser towards the base, marked thus:—a broad band before the middle (angulated on its lower edge outwardly) extending obliquely upwards to the shoulders, but not reaching the lateral margin, and enclosing a common basal patch of the ground-colour (in which at the base on either side of the scutellum is a testaceous spot), an angulated band behind the middle, narrowing outwardly and not reaching the lateral margin, and the apex (rather broadly), testaceous; legs and antennæ testaceous.

Length 5–5½ millim. (♂ ♀.)

Hab. Mexico, Jalapa (*Höge*).

Three examples. This species is closely allied to *O. mexicanus*, from which it is only distinguished by the different system of the elytral markings:—In *O. mexicanus* there is a broad band behind the middle (instead of before, as in *O. sticticopterus*), and behind this a testaceous spot (instead of a second angulated band) on either side of the suture (not mentioned in Dr. Horn's description), and the apex is never broadly testaceous, the apical margin at most being very narrowly so.

The female has the suture of the elytra very distinctly depressed on each side (in the form of a common oblong depression) some distance before the apex.

Fam. NILIONIDÆ.

This is a family of small extent, the species of which, owing to their hemispherical shape, resemble the Erotylid-genera *Ægithus* and *Coccimorphus*, and also the larger forms of Coccinellidæ. Two genera only are known—*Nilio*, containing 19 described species, all peculiar to Tropical America, the genus ranging as far north as Mexico; and *Hades*, containing a single species from Java. Thomson in his monograph of the Nilionidæ [Musée scientifique, pp. 5–14, 45, 46 (1860)] also includes *Catapotia* (a genus containing a single species, *C. lævissima*, Thoms., which is not uncommon throughout the Central-American region from Mexico to Panama) in it. This genus, as I have satisfied myself by the microscopic examination of authentic specimens from Mexico from the Sallé collection, has all the tarsi 4-jointed * (the third being comparatively very short) and very long and slender; and, in fact, it has nothing to do with the Heteromerous-series. *Catapotia* (of which excellent figures, less the tarsi, are given by Thomson, op. cit. t. 2. figg. 2, 2 *a–d*) doubtless belongs to the Erotylidæ or to the Endomychidæ.

The different species of *Nilio* are found about fungoid growth on decaying trees, and they are very sluggish in their movements.

NILIO.

Nilio, Latreille, Hist. nat. Crust. et Ins. iii. p. 179 (1802), and x. p. 333 (1804); Lacordaire, Gen. Col. v. p. 519 (1859); Thomson, Monogr. in Musée scientifique, p. 7, t. 1. figg. 1 *a–g* (1860).

Four species of this genus inhabit Central America, one only of which was previously described; these all have the elytra (if viewed from above) subtruncate at the base. The following table will assist in the recognition of the Central-American species:—

Antennæ with joints 4–11 black.	
Size large (6 millim.); elytra very broad and with prominent shoulders	*sallæi.*
Size smaller (4–5 millim.); elytra narrower and with more rounded shoulders	*fulvo-pilosus.*
Antennæ with joints 6–11 black.	
Elytra coarsely punctate-striate throughout, the interstices almost smooth	*thomsoni.*
Elytra more finely punctate-striate, the interstices thickly punctured .	*chiriquensis.*

1. Nilio sallæi.

Nilio sallei, Thoms. Mus. scient. p. 10, t. 3. fig. 4[1].

Hab. Mexico[1], Cordova (*Sallé*); Guatemala, Cubilguitz (*Champion*), Coban (*Conradt*).

* In Thomson's figure, op. cit. t. 4. f. 5, the tarsi as represented are purely imaginary, and they bear no resemblance to those of *C. lævissima*.

The Guatemalan examples are of a more fulvous and unicolorous tint than the two before me from Mexico.

2. **Nilio fulvo-pilosus.**

Brownish-fulvous, slightly shining, the elytra rather darker and sometimes of a redder tint, the sides of the prothorax and of the elytra (broadly) and the suture (narrowly) reddish-testaceous, the entire upper surface densely clothed with erect fulvous hairs. Head sparsely and somewhat coarsely, the prothorax more finely and sparingly, punctured; antennæ with joints 4–11 piceous or black, the rest testaceous; elytra almost straight at the base (if viewed from above), the shoulders somewhat rounded and only moderately prominent, each with nine regular rows of rather coarse punctures placed upon shallow striæ, the punctures not finer towards the apex, the interstices almost flat and (when viewed under a strong lens) sparsely and minutely punctured; legs and under surface obscure testaceous.
Length 4–5 millim.; breadth 3–3¾ millim.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Numerous examples. *N. fulvo-pilosus* may be easily separated from *N. chiriquensis* by the much smoother interstices, more regularly punctured striæ, and less prominent shoulders of the elytra, differently-coloured antennæ, fulvous pubescence, narrower shape, &c. The shoulders are more rounded than in the other Central-American species. The Colombian *N. lafertei*, Thoms., is apparently an ally of this insect; but the former is described as having joints 3–11 of the antennæ black, the elytral interstices punctured, and the colour red. *N. fulvo-pilosus* was found in company with *N. chiriquensis*, but much more sparingly.

3. **Nilio thomsoni.** (Tab. XXI. fig. 20.)

Brownish-fulvous with the sides of the prothorax and of the elytra (broadly) and the suture (narrowly) lighter, or unicolorous red, slightly shining, thickly clothed with erect fulvous hairs. Head and prothorax moderately finely and somewhat sparsely punctured, the disc of the latter smoother; antennæ with joints 6–11 piceous or black, the rest testaceous; elytra almost straight at the base (if viewed from above), the shoulders prominent, each with nine rows of coarse punctures placed upon shallow striæ, the punctures becoming coarser and a little more scattered towards the sides and apex, the interstices feebly convex and (when viewed under a strong lens) very sparsely and very minutely punctured; legs obscure testaceous.
Length 4½–5 millim.; breadth 3½–4½ millim.

Hab. Guatemala, Teleman (*Champion*); Nicaragua, Chontales (*Belt*, *Janson*).

Three examples only. This species is chiefly distinguished by its coarsely punctured striæ, the punctures still coarser towards the sides and apex, and almost smooth interstices of the elytra; it is allied to *N. fulvo-pilosus*. One of the two specimens from Nicaragua is of a unicolorous-red colour, but does not differ otherwise from the others.

4. **Nilio chiriquensis.** (Tab. XXI. fig. 21.)

Brownish-piceous with a slight bronzy tint, slightly shining, the head, the sides of the prothorax (broadly) and of the elytra, and the suture (narrowly) obscure testaceous, the entire upper surface densely clothed with erect cinereous hairs. Head and prothorax finely and sparsely punctured, the disc of the latter smoother; antennæ with joints 6–11 piceous or black, the rest testaceous; elytra almost straight at the base (if viewed

from above), the shoulders prominent, each with nine rather irregular rows of moderately coarse punctures placed upon shallow striæ, the punctures becoming a little finer towards the apex, the interstices almost flat (or very feebly convex) and finely and thickly punctured throughout; legs and under surface obscure testaceous.

Length 4–5 millim.; breadth 3½–4 millim.

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Found in abundance by myself in Chiriqui, in old forest-clearings. This species may be at once separated from the others noticed here by its thickly punctured elytral interstices; it resembles *N. sallæi* in its general shape. *N. chiriquensis* and *N. fulvo-pilosus* are smaller than any other species of the genus yet described.

Fam. MONOMMIDÆ.

This family was formerly placed between the Throscidæ and the Eucnemidæ; but it is now generally regarded as belonging to the Heteromera. Two genera only have hitherto been described, one from the Eastern and one from the Western hemisphere; we have to notice a third from Central America. The characters of the family as given by Lacordaire, Thomson, Leconte, and Horn now require modification, the new genus here described having a 2-jointed club to the antennæ.

HYPORHAGUS.

Hyporhagus, Thomson, Ann. Soc. Ent. Fr. 1860, p. 25.

This New-World genus contains twenty-one described species, the majority of which are from Tropical South America: four are known from the southern United States, two from Mexico, two from the Antilles, and one from as far south as Monte Video. *Hyporhagus* is closely allied to *Monomma* and is chiefly distinguished from that genus by the rounded (not emarginate) anterior outline of the thorax. We have now to record eight species of *Hyporhagus* from Central America, three of which are described as new. One species has been found beneath fallen Opuntias; those captured by myself were beaten from herbage, or from the withered branches of fallen trees.

The Central-American representatives may be tabulated as follows:—

- Upper surface dull.
  - Elytra with costate striæ . . . . . *costulatus.*
  - Elytra punctate-striate.
    - Thorax long and strongly margined . . . . . *opuntiæ, gilensis.*
    - Thorax shorter and more feebly margined . . . . . *durangoensis.*

Upper surface more or less shining.
Mesosternum broadly and shallowly arcuate-emarginate in front.
Form ovate or oblong ovate, moderately convex.
Elytral striæ feebly costate laterally . . . . . *yucatanus.*
Elytral striæ not costate laterally . . . . . *lævepunctatus.*
Form short ovate, very convex; elytral striæ almost obliterated on the disc from a little before the middle, coarsely punctured at the base . . . . . *obliteratus.*
Mesosternum very deeply and semicircularly emarginate in front . *emarginatus.*

1. Hyporhagus costulatus.

Hyporhagus costulatus, Thoms. Monogr. in Ann. Soc. Ent. Fr. 1860, p. 34, t. 3. fig. 12[1].

Hab. MEXICO, Yucatan (*coll. Mniszech*[1]).

Unknown to me.

2. Hyporhagus opuntiæ. (Tab. XXI. fig. 22.)

Hyporhagus opuntiæ, Horn, Trans. Am. Ent. Soc. iv. p. 149[1].

Hab. NORTH AMERICA, Arizona[1].—MEXICO, Northern Sonora (*Morrison*).

Twelve examples have been sent to us by the late Mr. Morrison; these vary from $4\frac{2}{3}$–$6\frac{1}{2}$ millim. in length.

3. Hyporhagus gilensis.

Hyporhagus gilensis, Horn, Trans. Am. Ent. Soc. iv. p. 149[1].

Hab. NORTH AMERICA, Arizona[1].

This species is recorded from south of the Gila River, from just within our northern boundary.

4. Hyporhagus durangoensis. (Tab. XXI. fig. 23.)

Oblong ovate, black, subopaque, the head, the prothorax anteriorly and laterally (broadly but indeterminately), the margins of the elytra (indistinctly), and the under surface, legs, and antennæ, obscure rufous. Head very finely and densely punctured, behind the eyes much more coarsely so; prothorax transverse, the sides rapidly converging from the base and a little rounded anteriorly, the surface thickly and rather coarsely punctured (more coarsely so than the anterior part of the head), the punctures here and there longitudinally confluent towards the sides, the latter only very shallowly impressed within the moderately prominent lateral margins; elytra rather narrowly margined, with fine, shallow, sharply-cut striæ, the striæ all distinct (the two inner ones on each side of the suture shallower than the others) and with fine shallow closely placed punctures, the interstices sparsely, very shallowly, and minutely punctured, the punctures closer and more distinct at the extreme base, the disc a little more shining than the rest of the surface; beneath very sparsely and minutely punctured, the metasternum at the sides rather coarsely and irregularly punctured and wrinkled; mesosternum broadly and shallowly arcuate-emarginate in front.
Length $4\frac{1}{4}$ millim.; breadth $2\frac{2}{3}$ millim. (♀.)

Hab. MEXICO, Ventanas in Durango (*Höge*).

A single (rather immature) example. Allied to the two preceding species; but with the thorax much shorter and with the lateral margins less prominent and not so deeply grooved within, and the striæ of the elytra much more finely and closely punctured. The last-mentioned character will separate it from *H. opaculus*, Lec.

5. Hyporhagus yucatanus.

Hyporhagus yucatanus, Thoms. Monogr. in Ann. Soc. Ent. Fr. 1860, p. 33, t. 3. fig. 3 [1].

Hab. MEXICO, Merida and Temax in North Yucatan (*Gaumer*), Yucatan [1].

The numerous specimens received from Mr. Gaumer differ from Thomson's description and figure in having the margins of the elytra less distinctly rufescent; but this may be due to discoloration. *H. yucatanus* is broader and more depressed than any of the other species of the genus inhabiting Central America. The three basal joints of the anterior tarsi are dilated in the male.

6. Hyporhagus lævepunctatus.

Hyporhagus lævepunctatus, Thoms. Monogr. in Ann. Soc. Ent. Fr. 1860, p. 30, t. 3. fig. 10 (♂) [1].
Hyporhagus lecontei, Thoms. loc. cit. p. 31, t. 3. fig. 11 (♀) [2] (apud Horn, Trans. Am. Ent. Soc. v. p. 151 [3]).

Hab. MEXICO, Almolonga (*Flohr*); GUATEMALA, El Tumbador, Pantaleon, San Gerónimo, Chacoj (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*). —COLOMBIA [1].

The Central-American specimens before me from the above localities are doubtless referable to this species. According to Dr. Horn [3], who has examined the types of Thomson's species, *H. lecontei* is the male of *H. lævepunctatus*; the former, moreover, is not from California as stated [2], but from Colombia.

In our insect the two basal joints of the anterior tarsi are a little dilated in the male, and the mesosternum is broadly and shallowly arcuate-emarginate in front. *H. fusciceps*, Thoms., also from Colombia, appears to be very closely allied to *H. lævepunctatus*, but to differ from it in the more coarsely punctured elytral striæ.

7. Hyporhagus emarginatus. (Tab. XXI. figg. 24, ♂; 24 *a*, mesosternum.)

Oblong ovate, black, shining, the head anteriorly, the prothorax anteriorly and at the sides (broadly), the margins of the elytra, and the legs and antennæ, red. Head densely and not very finely punctured; prothorax transverse, the sides converging from the base, a little rounded, and rather deeply grooved within the prominent lateral margins, the surface sparsely, equally, and somewhat finely punctured; elytra broadly margined, with rows of shallow rather fine punctures placed upon very fine shallow striæ, the punctures becoming still finer towards the sides and apex, the interstices finely and sparsely (but quite distinctly) punctured: beneath very sparsely and minutely punctured, the metasternum at the sides rather coarsely and irregularly punctured and wrinkled; mesosternum very deeply and semicircularly emarginate in front; anterior tarsi in the male with the three basal joints somewhat broadly dilated.

Length $3\frac{1}{4}$–4 millim.; breadth 2–$2\frac{1}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, Torola (*Champion*); PANAMA, Bugaba, Tolé (*Champion*).

Six specimens from Guatemala and three from the State of Panama, all of which were captured on the lower part of the Pacific slope and at elevations of not more than 1000 feet. *H. emarginatus* closely resembles the species here identified as *H. lævepunctatus*, but has a very differently-formed mesosternum; it is also smaller in size, and has the sides of the thorax (as well as the anterior portion) and the reflexed margins of the elytra red, and the three basal joints of the anterior tarsi dilated in the male.

8. **Hyporhagus obliteratus.** (Tab. XXI. fig. 25.)

Elliptical, short, very convex, black, shining, the head anteriorly and the anterior fourth of the prothorax rufescent, the legs and antennæ fusco-ferruginous. Head finely and densely punctured; prothorax short, transverse, the sides a little rounded and very rapidly converging from the base, the lateral margins moderately prominent and only feebly grooved within (more deeply so within the anterior angles), the surface very sparsely and finely punctured; elytra narrowly margined, very obsoletely striate, the striæ with scattered punctures, the punctures on the disc coarse and irregular at the base and almost obliterated beyond, the interstices with exceedingly minute scattered punctures (only visible under a strong lens); beneath brownish-piceous, exceedingly minutely and very sparsely punctured, the metasternum almost smooth; mesosternum broadly and shallowly arcuate-emarginate in front; anterior tarsi with the three basal joints feebly dilated in the male.

Length $3\frac{1}{3}$ millim.; breadth $2\frac{1}{3}$ millim. (♂.)

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Two male examples. This distinct new species is shorter and more convex than any *Hyporhagus* yet described; the general outline is elliptical, and the elytra are comparatively very narrowly margined. In the elytral sculpture *H. obliteratus* agrees almost exactly with Thomson's figure and description of *H. cayennensis*, from Pará; the latter, however, is of a more elongate shape, and has more broadly margined elytra, &c.

ASPATHINES.

Closely allied to *Hyporhagus* and differing as follows:—Antennæ very short, the basal joint scarcely twice as long as the equally stout second, joints 6–9 very strongly transverse, 10 and 11 only broadly widened and forming a 2-jointed club; the grooves for the reception of the antennæ very deep, parallel anteriorly, very sharply curved about the middle, and extending outwardly towards the anterior angles; elytra very finely and narrowly margined, the margins not extended and invisible from above.

This genus contains a single species, which is widely distributed in Central America. The 2-jointed antennal club and peculiarly-formed antennal grooves—in *Hyporhagus* these grooves curve gradually towards the hind angles of the thorax, in *Aspathines* they are very sharply curved behind and extend upwards towards the anterior angles—distinguish the genus at once from *Hyporhagus* and *Monomma*. The elytra are convex laterally and the margins are quite invisible from above. The anterior tarsi are very little stouter in the male than in the female.

A. ovatus is smaller than any species of Monommidæ yet described.

1. **Aspathines ovatus.** (Tab. XXI. figg. 26 ; 26 *a*, antenna.)

Short ovate, very convex, æneous, very shining, the head, the prothorax anteriorly and laterally (but indeterminately), and the legs and antennæ, more or less rufous ; head densely punctured ; prothorax transverse, the sides a little rounded and rapidly converging from the base and somewhat deeply grooved (especially at the base and apex) within the prominent lateral margins, the surface sparsely and moderately finely punctured, a longitudinal space in the middle of the disc impunctate ; elytra each with nine rows of rather fine somewhat scattered punctures placed upon very shallow striæ, the punctures still finer on the middle of the disc, the discal interstices each with a median row of exceedingly minute scattered impressions (only visible under a strong lens and sometimes obsolete), the others impunctate ; beneath brownish-piceous, sparsely and somewhat coarsely punctured, the anterior half of the metasternum smoother ; the sides of the prosternum and the anterior edges of the meso- and metasternum immarginate, the mesosternum truncate in front ; legs, including the tarsi, rather slender.

Length 2–3 millim. ; breadth $1\frac{1}{2}$–2 millim. (♂ ♀.)

Hab. Mexico, Temax and Merida in North Yucatan (*Gaumer, Sallé*) ; Guatemala, Mirandilla, Torola, San Gerónimo (*Champion*) ; Panama, San Lorenzo (*Champion*).

Nine examples, three of which have quite recently been forwarded to me by M. Sallé.

SUPPLEMENT.

Group **EPIPHYSIDES.** (To precede the group *Tentyriides*, p. 1.)

PIMELIOPSIS.

Mentum exceedingly large, filling the gular cavity, and covering the maxillæ and ligula; mandibles strongly toothed on the upperside above, feebly cleft at the apex; last joint of the maxillary palpi narrow, feebly triangular; labrum not prominent; head exceedingly large and broad, sunk into the prothorax up to the eyes, the latter small, transverse, entire, and rather prominent, the supraocular carina distinct, the epistoma declivous and angularly produced in the middle, confounded with the front, and limited posteriorly by a broad shallow transverse depression, which becomes deeper laterally, the lateral lobes thickened, broadly rounded, not prominent; antennæ extending to a little beyond the base of the prothorax, the third joint longer than the fourth, the eleventh small; prothorax much wider than the head, short, with prominent, acute, anterior angles, the base very feebly bisinuate and closely fitting to that of the elytra; scutellum not visible; elytra connate, broad oval, short, obtuse behind, the width of the prothorax at the base, subcarinate and granulate, the sides very broadly inflexed; the epipleuræ narrowing behind, only extending as far as the apex of the second ventral segment; coxæ widely separated; prosternum horizontally raised between the coxæ, and meeting behind the similarly-raised mesosternum; metasternum short, the episterna very broad; intercoxal process of the abdomen broadly rounded at the apex; ventral segments entirely corneous; legs short and stout, the tibial spurs rather short; tarsi clothed with short spiny hairs and not sulcate beneath: body apterous, sparsely clothed with coarse decumbent hairs, the sides of the elytra with long erect hairs.

The above generic name is proposed for a single species from Western Mexico, for the discovery of which we are indebted to Mr. H. H. Smith. *Pimeliopsis* belongs to the tribe "Epiphysides" of Lacordaire, and is allied to the North-American genus *Edrotes*, from which it differs in the form of the head and other particulars. The single species has very much the facies of a small *Pimelia*.

1. **Pimeliopsis granulata.** (Tab. XXII. fig. 1.)

Oblong-oval, broad, convex, dull black, above and beneath sparsely clothed with long, coarse, decumbent, yellowish hairs, the sides of the elytra with much longer erect hairs. Head densely covered with extremely coarse, very shallow punctures, the depressed space behind the epistoma very sparsely, finely punctate; prothorax convex, twice as broad as long, widest at the middle, slightly narrowed in front and behind, the anterior angles acutely produced in front, the hind angles obtusely rectangular, the margins crenulate, the surface punctured like that of the head, but with the punctures becoming coarsely muricate towards the sides, the base very broadly and shallowly depressed on either side of the middle; elytra rather more than three times as long as the prothorax, widest at the middle, slightly rounded at the sides, a little narrowed at the base, the latter very broadly truncate, each with four faint carinæ, the entire surface somewhat thickly covered with small, smooth, granular elevations, which are more regularly and more closely placed along the suture and on the carinæ, the latter more distinct towards the apex and laterally, and with the hairs more erect than upon the interstices; the entire under surface exceedingly coarsely, closely punctate.

Length $7\frac{1}{2}$–9, breadth 4–5 millim.

Hab. Mexico, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

Two examples.

TRIOROPHUS (p. 1).

Triorophus nodiceps (p. 2).

To the Mexican locality given, add:—San Felipe Sabinas in Coahuila (*Flohr*).

Three additional specimens of this species have been received by us from Mr. Flohr.

3. **Triorophus lecontei.**

Triorophus lecontei, Casey, Ann. N. York Acad. v. pp. 327, 502 (Nov. 1890)[1].

Hab. North America, El Paso in Texas [1].—Mexico, Paso del Norte in Chihuahua, Chihuahua city, Villa Lerdo in Durango (*Höge*).

Found in abundance by Herr Höge at Villa Lerdo. Mexican specimens agree with Capt. Casey's description, except that many of them have the thorax as finely punctured as in *T. lævis.*

TRIMYTIS. (To follow the genus *Triorophus*, p. 2.)

Trimytis, Leconte, Ann. Lyceum N. York, v. p. 141 (1852); Horn, Rev. Ten. of Am. north of Mexico, p. 261.

Three species of this genus have been described, all from the United States; two are now added from Mexico.

1. **Trimytis obovata.** (Tab. XXII. fig. 2.)

Moderately elongate, obovate, very convex, pitchy-black, slightly shining. Head finely, sparsely punctate, and with numerous short longitudinal rugæ between the eyes; eyes not prominent, the orbits extending halfway across them; middle lobe of the epistoma broadly produced, subtruncate in front; prothorax strongly transverse, subtruncate at the base and apex, the sides gradually and obliquely converging from the base, the anterior angles acutely prolonged in front, and with a few fine vibrissæ, the disc rather finely, the lateral portions very coarsely and deeply, punctate, the punctures towards the sides longitudinally confluent; elytra moderately long, widest a little behind the middle, slightly narrowed in front, finely margined at the base, with regular series of coarse deep punctures extending from the base to the middle, almost smooth beyond, the interstices with a few very widely scattered exceedingly minute punctures, the scutellar region more distinctly punctate; beneath exceedingly coarsely, deeply punctate, the ventral surface with very minute scattered punctures.

Length $5\frac{2}{3}$ millim. (♂.)

Hab. Mexico, Chihuahua city (*Höge*).

One specimen. Closely allied to *T. pruinosa*, Lec., but of more obovate shape, the anterior angles of the thorax more acute, the elytra with regular series of coarse punctures on their basal half, their interstices almost smooth.

2. **Trimytis flohri.**

Elongate-ovate, rather narrow, very convex, brownish-black, subopaque. Head, including the mandibles, rather coarsely, very densely punctate, the punctures longitudinally confluent; eyes rather prominent, the orbits scarcely impinging upon them; middle lobe of the epistoma broadly produced, rounded in front; prothorax strongly transverse, very convex, bisinuate at the base, a little narrowed in front, the sides

slightly rounded before the middle, the hind angles sharply rectangular, the anterior angles sharp but not very prominent, the surface densely, rather coarsely punctate, the punctures here and there longitudinally confluent, especially towards the sides, the disc faintly transversely depressed in the middle before the base; elytra the width of the prothorax at the base, and three times as long as it, subparallel, finely margined at the base, with regular series of rather fine, closely placed punctures, the interstices flat, finely punctured—the punctures forming two rows on each interstice towards the suture and single rows laterally.

Length 6 millim.

Hab. Mexico, near the city (*Flohr*).

We are indebted to Mr. Flohr for an example of this species. It is closely allied to the North-American *T. pulverea*, Horn, and has the head formed as in that insect, but differs in its more elongate shape; the eyes are more prominent (the orbits impinging very slightly upon them in front); the elytra are much more elongate, with the punctures of the series finer and closer, and the interstices flat.

TRIENTOMA (p. 2).

Allard's paper on this genus [Ann. Soc. Ent. Belg. xxvii. p. 14 (1883)] was overloooked by me. No additional evidence is forthcoming as regards the two species described as from Mexico (*anteà*, p. 2), and it is exceedingly probable that both of them are from the island of San Domingo. *T. mexicana* is not really distinct from *T. sallæi*, Kr., from San Domingo; *T. rugifrons* is an ally of *T. ryticephala*, All., from the same island, but differs in its less opaque surface, more coarsely punctured thorax, and the minutely punctured, slightly convex, elytral interstices.

MESABATES (p. 3).

Two more species are now added to this genus. These agree with *M. latifrons* (additional specimens of which have been received from Huitzo in Oaxaca) in having a short, broad head, which is more or less dilated anteriorly and feebly trilobed in front; the eyes are not at all prominent, and partly divided by the sides of the front; the epistoma is declivous and produced in the middle in front, very short as seen from above, and limited posteriorly by a transverse depression; the body is apterous. *M. spissicornis* differs from the two other species in being without a supraorbital ridge.

2. **Mesabates spissicornis.**

Moderately elongate, rather depressed, subparallel, opaque, pitchy-brown. Head short, broad, dilated anteriorly, thickly, rather coarsely punctate; the epistoma short, declivous and produced in the middle in front, truncate at the apex, limited posteriorly by a shallow transverse depression; the eyes very small, almost divided by the sides of the front, which are rounded anteriorly and thickened, without supraorbital ridge: antennæ long and stout, thickening outwardly, joints 9 and 10 very strongly transverse; prothorax transverse, the sides moderately rounded, very feebly sinuate before the base, widest at the middle, very little wider at the base than at the apex, the anterior and hind angles prominent but rather obtuse, the base subtruncate, the entire surface uniformly, densely, rather coarsely punctate; elytra the width of

the prothorax, and nearly three times as long as it, subparallel in their basal half, with rows of fine, subapproximate punctures, which become still finer towards the apex, the interstices flat, each with an irregular row of punctures which are very little finer than those of the striæ; beneath very coarsely, closely punctate, the ventral surface more sparsely and finely so; tarsi clothed with spiny hairs beneath, the first joint of the hind pair as long as 3 and 4 together.

Length 5 millim.

Hab. Mexico, La Noria in Sinaloa (*Höge*).

This small species has much the facies of a *Blapstinus*. One specimen.

3. **Mesabates inæqualis.**

Obovate, convex, opaque, black or brownish-black. Head short, broad, a little dilated anteriorly, rather sparsely, finely punctate; the epistoma very broad, short, declivous and produced in front, broadly truncate at the apex, limited posteriorly by a transverse depression which extends laterally to the sharp supraorbital ridge; the eyes not prominent, divided to about the middle by the sides of the front, which are rounded anteriorly and somewhat swollen; antennæ slender, joints 9 and 10 as long as broad; prothorax convex, transverse, widest a little behind the middle, the sides almost parallel behind, gradually, obliquely converging in front, the anterior angles somewhat produced and with a few fine vibrissæ, the hind angles nearly rectangular, the base subtruncate, the surface coarsely, confluently punctured at the sides, sparsely and finely so on the disc; elytra slightly wider than the prothorax, oval, with rows of very fine, shallow, not very closely placed punctures, which become obsolete towards the apex, the interstices flat, minutely, sparsely punctate from the base to the middle, almost smooth beyond; beneath very coarsely punctured, the ventral surface finely and sparsely so; tarsi clothed with spiny hairs beneath, the first joint of the hind pair as long as 3 and 4 together.

Length 5–6½ millim.

Hab. Mexico, Chihuahua city, Refugio and Villa Lerdo in Durango, Aguas Calientes city (*Höge*).

Numerous examples. In its obovate shape &c. this species resembles *Trimytis obovata*, but it has a very differently formed head. The punctuation of the elytra is sometimes very faint; the thorax has the middle of the disc finely and sparsely, and the sides coarsely and confluently, punctate, the transition from one to the other being very abrupt. The antennæ are much more slender than in *M. latifrons* and *M. spissicornis*; the intercoxal process of the abdomen is broader than in *M. latifrons*.

EMMENASTUS (p. 8).

The North-American species of *Emmenastus* and *Eurymetopon* have been recently monographed at great length by Capt. Casey (Ann. N. York Acad. v. pp. 330–365).

Of *Emmenastus* we have received a large amount of additional material, but of *Eurymetopon* nothing fresh has come to hand.

Emmenastus belti (p. 11).

Emmenastus rotundicollis, huj. op. p. 11.
Emmenastus intermedius, huj. op. p. 12.

To the localities given, add:—Mexico, Temax in North Yucatan (*Gaumer*).

The numerous specimens received from Mr. Gaumer connect *E. rotundicollis* and *E. intermedius* with *E. belti*. The thorax is more rounded at the sides in some examples (as in *E. rotundicollis* and *E. belti*), and the punctuation is variable, it being finer and sparser on the disc (*E. belti* and *E. intermedius*) or almost uniform (*E. rotundicollis*).

Emmenastus parallelus (p. 12).

To the locality Mexico, add:—Matamoros Izucar (*Flohr*, *Höge*), Cuautla (*Flohr*), Atlixco, Cuernavaca (*Höge*).

Numerous additional examples have been received of this species.

10 (A). **Emmenastus mexicanus.**

Elongate-ovate, narrow, subparallel, black, opaque. Head thickly, rather coarsely punctate, the eyes not prominent; antennæ slender, moderately long; prothorax convex, strongly transverse, subparallel behind, narrowing anteriorly, the anterior angles sharp, the hind angles subrectangular, the base feebly bisinuate and with a very shallow but distinct fovea on either side laterally, the surface rather coarsely, confluently punctured towards the sides, sparsely and finely so on the middle of the disc, the disc with a smooth central line and a transverse depression before the base, a narrow space between the basal foveæ shining, more sparsely punctate; elytra the width of, and about four times as long as, the prothorax, subparallel to beyond the middle, with rows of fine, approximate, rather deep punctures, the interstices flat, each with an irregular row of minute punctures; beneath very sparsely punctate; tarsi clothed with coarse yellowish hairs beneath: body winged.

Length 7–7¼ millim.

Hab. Mexico, near the city (*Höge*).

Two examples. Allied to *E. parallelus*, but with the thorax more coarsely, more sparsely punctate, and very shallowly but distinctly foveate at the base towards the sides, the space between the foveæ shining and almost smooth; the elytra with the serial punctures coarser and more deeply impressed.

Emmenastus tenebrosus (p. 12).

To the Mexican locality given, add:—Aguas Calientes city, Mexico city (*Höge*).

The wings in this species are abbreviated.

12 (A). **Emmenastus subapterus.**

Elongate-ovate, rather broad, slightly shining, black or pitchy-brown. Head finely, somewhat thickly punctate, the eyes not prominent; antennæ slender, moderately long; prothorax strongly transverse, moderately rounded at the sides, narrowing from about the basal third, the anterior angles rather sharp, the hind angles subrectangular, the base distinctly bisinuate and grooved within the margin on either side of the middle, the surface finely, thickly punctate, the punctures towards the sides partly confluent; elytra moderately long, with rows of very distinct, fine, approximate punctures, the interstices flat, very sparsely, minutely punctate; beneath obscure ferruginous, somewhat thickly punctured; tarsi clothed with coarse hairs beneath; wings very small, rudimentary.

Length 7–7½ millim.

Hab. Mexico, Ventanas in Durango (*Höge*), Canelas in Durango (*Flohr*).

Three examples. This species is nearest allied to *E. tenebrosus*, but has still more rudimentary wings; it is also broader and has the elytral interstices very sparsely, minutely punctate, the serial punctures much more distinct. In the single specimen from Canelas the thorax has an oblique basal fovea on one side and not on the other. From *E. picipes* &c. the present species may be easily known by the distinctly bisinuate base of the thorax.

Emmenastus alatus (p. 13).

Emmenastus salvini, huj. op. p. 13.

16 (A). Emmenastus seriatus.

Oblong-ovate, brownish-black, opaque, the elytra slightly shining. Head rather sparsely, finely punctate, more coarsely so between the eyes, the latter not prominent; antennæ slender; prothorax convex, transverse, moderately rounded at the sides and gradually narrowing almost from the base, the base strongly bisinuate and grooved within the margin on either side of the middle, the anterior angles rather sharp, the hind angles subrectangular, the surface finely, moderately closely punctured, the punctures finer and more scattered on the disc; elytra the width of the prothorax at the base, subparallel in their basal half, moderately long, with series of rather coarse, deep, approximate punctures, the interstices flat, with serially arranged fine punctures, which become coarser towards the suture; beneath sparsely punctate; tarsi with spiny hairs beneath: body winged.

Length 6–6½ millim.

Hab. Mexico, Tehuantepec (*Höge*).

Three examples. Allied to *E. guatemalensis*, but larger and less parallel, with the interstitial punctuation of the elytra coarser and closer towards the suture. It differs from *E. alatus* in having the basal margin of the thorax grooved within on either side of the middle, without trace of foveæ.

Emmenastus confusus (p. 15).

To the localities given, add:—Mexico, Tapachula in Chiapas (*Höge*).

Found in plenty by Herr Höge.

19 (A). Emmenastus constrictus.

Elongate, narrow, opaque, pitchy-red. Head densely, rather coarsely punctate, the epistoma subangularly produced in the middle and separated from the lateral portions by a distinct emargination; the eyes prominent; the mandibles toothed on the upperside at some distance before the apex; antennæ slender, moderately long; prothorax convex, transverse, narrowed behind, only a little wider at the base than at the apex, widest at the middle, the sides strongly rounded, the anterior angles acute, the hind angles subrectangular, the base bisinuate and rather broadly and deeply grooved within, the groove terminating laterally in a very shallow oblique depression, the surface closely and rather coarsely punctate, the punctures a little finer and more scattered on the disc; elytra elongate-oval, slightly narrowed at the base, with rows of very shallow, fine, approximate, muricate punctures, which become almost obsolete on the disc towards the apex, the interstices flat, finely alutaceous, very shallowly, sparsely, minutely

punctate; beneath obscure ferruginous, opaque; tarsi clothed with spiny hairs beneath, the first joint of the hind pair as long as the third and fourth united: body winged.
Length $4\frac{1}{2}$–5 millim.

Hab. Mexico, Iguala in Guerrero, Cuernavaca in Morelos (*Höge*).

Three examples. This species has quite a different facies from any of the other Central-American members of the genus. The head is feebly trilobed in front, both mandibles are toothed on the upperside, the thorax is considerably narrowed behind and deeply grooved within the basal margin, and the elytral interstices are finely alutaceous. The external (or ninth) row of punctures on the elytra is deeply impressed towards the base, and within the reflexed margin there is a row of coarse impressions.

Emmenastus mancus (p. 15).

To the Mexican localities given, add:—Chilpancingo and Acapulco (*Höge*).

Emmenastus curtus (p. 16).

To the Mexican locality given, add:—Ventanas in Durango (*Höge*).

Emmenastus lentus (p. 16).

To the Mexican locality given, add:—Chihuahua city (*Flohr*, *Höge*), Villa Lerdo in Durango (*Höge*).

Found in plenty at Villa Lerdo. These additional specimens differ from the slightly immature type in the more distinct punctuation of the elytral interstices. *E. lentus* is very closely allied to *E. convexus*, Lec. (for a specimen of which I am indebted to Capt. Casey), but differs from it in having the punctures of the elytral series much more distinct, the thorax more rounded at the sides, and the ventral surface more closely punctate. In some of the Durango specimens the thorax is more densely and more confluently punctured.

Emmenastus pulvinatus (p. 17).

To the Mexican locality given, add:—Mexico city (*Flohr*, *Höge*), Pachuca in Hidalgo, Tehuantepec (*Höge*).

27. Emmenastus stolidus.

Elliptic, rather broad, short, feebly convex, opaque, black or pitchy-brown. Head finely, rather thickly punctate; antennæ moderately elongate, the basal joints slender; prothorax strongly transverse, the sides rapidly converging almost from the base, the anterior and posterior angles obtuse, the base almost straight and shallowly grooved within the margin on either side of the middle, the surface finely and rather closely punctured, the punctures finer and sparser on the middle of the disc; elytra the width of the prothorax at the base, rather short, narrowing from about the middle, with rows of very fine, shallow, closely placed punctures, the interstices flat, exceedingly minutely, sparsely punctate; beneath pitchy-

brown or ferruginous, sparsely punctured; tarsi clothed with rather long coarse hairs beneath: body apterous.

Length 6 millim.

Hab. MEXICO, Tehuantepec (*Höge*).

Three specimens. Of regularly elliptic form, comparatively short and broad, and somewhat depressed; the serial punctures of the elytra very faint. The thorax is trapezoidal in shape, and finely grooved within the basal margin, but not foveate. *E. stolidus* is not very closely allied to any other *Emmenastus* described here, but it approaches the following; both apparently belong to Casey's Section III., which includes one species only, *E. punctatus*, Lec., from Lower California.

28. **Emmenastus igualensis.**

Elongate-ovate, broad, rather depressed, opaque, rufo-piceous or obscure castaneous. Head finely, somewhat closely punctate, the eyes rather prominent; antennæ slender, moderately elongate; prothorax strongly transverse, moderately rounded at the sides, narrowing from about the basal third, the base very feebly bisinuate and grooved within the margin on either side of the middle, the hind angles rather obtuse, the anterior angles subacute, the surface finely, closely punctate towards the sides, sparsely, minutely so on the middle of the disc; elytra the width of the prothorax at the base, elongate, with rows of very fine, shallow, approximate punctures, which become fainter towards the suture, the interstices flat, exceedingly minutely, sparsely punctate; beneath obscure ferruginous, sparsely punctured; tarsi thickly clothed with long yellowish hairs beneath: body apterous.

Length 8 millim.

Hab. MEXICO, Iguala in Guerrero (*Höge*).

Four specimens. In the very faint punctuation of the upper surface this species approaches *E. stolidus*, from which it differs in its much more elongate shape and larger size, and in having the thorax less narrowed in front. The thorax is grooved within the basal margin, but not foveate.

SCHŒNICUS (p. 18).

Schœnicus viridis (p. 19).

To the localities given, add:—MEXICO, Villa Lerdo in Durango (*Flohr*), Venta de Zopilote, Savana Grande, and Rincon, all in Guerrero (*H. H. Smith*).

Varies greatly in colour. One specimen from Savana Grande is ultramarine-blue.

Schœnicus rufipes (p. 19).

To the localities given, add:—MEXICO, Temax in North Yucatan (*Gaumer*).

Received in abundance from Yucatan. Many specimens are rufo-piceous in colour. All the examples but one have the legs more or less rufous. *S. impressus*, from Costa Rica, is probably a dark-legged variety of the same species.

Schœnicus difficilis (p. 20).

To the Mexican localities given, add :—Chilpancingo (*Höge*, *H. H. Smith*), Tacambaro (*Flohr*, *Höge*), Ventanas, Zapotlan, Morelia, Huitzilac, Acapulco (*Höge*).

Numerous additional examples have been received, showing that this insect is quite distinct from *S. chalybeus*.

Schœnicus pectoralis (p. 21).

To the Mexican localities given, add :—Tonila and Zapotlan in Colima, Chilpancingo, Cuernavaca, Guadalajara, Sayula (*Höge*).

Schœnicus vestitus (p. 22)

To the Mexican localities given, add .—Acapulco, Sayula (*Höge*), Rincon and Tierra Colorada in Guerrero (*H. H. Smith*).

EPITRAGUS (p. 23).

Epitragus sallæi (p. 24).

To the localities given, add :—Mexico, Temax in North Yucatan (*Gaumer*), Tapachula in Chiapas (*Höge*); Honduras (*Casey*).

Apparently a common insect in Chiapas and Yucatan.

Epitragus ornatus (p. 26).

To the Mexican localities given, add :—Villa Lerdo in Durango (*Flohr*).

The male of this species is very like the same sex of *E. littoralis*, but has more acute hind angles to the thorax.

Epitragus angusticollis (p. 26).

To the Mexican locality given, add :—Chilpancingo in Guerrero (*Höge*).

Two additional examples of this species have been received, both females, like the type.

Epitragus littoralis (p. 27).

To the Mexican locality given, add :—Iguala, Cuernavaca (*Höge*).

Two males received from Herr Höge seem to belong to this species, the original specimens of which came from the Pacific coast.

9 (a). **Epitragus cristatus.** (Tab. XXII. fig. 4, ♀.)

Oblong-ovate, broad, obtuse behind, æneous, sometimes with a greenish or cupreous tint, clothed with very short yellowish-cinereous pubescence. Head thickly, finely punctate, with a tuft of long, coarse, erect, fulvous hairs between the eyes in both sexes, the median lobe convex and broadly produced in front, the lateral

lobes not prominent, the supraorbital carina indistinct; prothorax—(♀) broader than long, glabrous, exceedingly minutely, very sparsely punctate, with a smooth central line, the sides obliquely converging from the base, feebly rounded anteriorly, the lateral margins thickened and strongly reflexed, the disc with a stout, longitudinal ridge on either side extending to the anterior margin, the two forming a U-shaped elevation and enclosing a deep depression, the anterior angles acutely produced in front, the hind angles acute, the apical margin trisinuate—(♂) regularly convex, pubescent, thickly, finely punctate, with a smooth central line, the lateral margins not thickened; elytra very much broader than the prothorax, densely, minutely punctate, with traces of very shallow longitudinal grooves; beneath densely, finely punctate, the metasternum smoother; mesosternum V-shaped, deeply excavate for the reception of the prosternum; anterior tibiæ feebly dilated at the apex.

Length 11½–12½ millim. (♂ ♀.)

Hab. Mexico, Colima city, Chilpancingo (*Höge*).

Found in abundance by Herr Höge during his second expedition. *E. cristatus* may be readily known from the allied forms by the long tuft of fulvous hairs between the eyes in both sexes. It comes nearest *E. littoralis*, but the female has the thorax smoother, less widened behind, and with the lateral margins thickened and strongly reflexed; the males of the two species are exceedingly similar.

Epitragus acutus (p. 27).

The Mexican localities quoted should be transferred to *E. canaliculatus*; we have received specimens of both sexes of *E. acutus* from Monterey, Nuevo Leon (*Höge*).

I am indebted to Dr. Horn for forwarding female examples of *E. acutus* and *E. canaliculatus* for comparison. *E. acutus* (♀) has the thoracic margins more broadly thickened at the middle.

Epitragus rorulentus (p. 27).

Epitragus scutatus, huj. op. p. 28.

To the Mexican localities given, add:—Aguas Calientes city, Guadalajara, Tonila and Zapotlan in Colima (*Höge*).

E. scutatus is an aberrant example of this species, with the anterior angles of the thorax unusually prominent and thickened, and the head with a well-marked supraorbital carina; both characters are inconstant.

Epitragus canaliculatus (p. 28).

To the Mexican localities given, add:—Paso del Norte, Santa Clara, Chihuahua city, Villa Lerdo in Durango, Durango city, Aguas Calientes city (*Höge*).

Found in plenty by Herr Höge in Northern Mexico.

Epitragus grandis (p. 31).

To the Mexican localities given, add:—Chilpancingo, Iguala, Tapachula (*Höge*), Puente de Ixtla (*H. H. Smith*).

Epitragus acutangulus (p. 31).

To the locality given, add :—Mexico, Tapachula in Chiapas (*Höge*).

Epitragus aurichalceus (p. 33).

To the Mexican localities given, add :—Chilpancingo in Guerrero (*Höge, H. H. Smith*).

Found in plenty by Herr Höge.

26 (a). **Epitragus gracilis.**

Epitragus gracilis, Casey, Ann. N. York Acad. v. p. 366 (Nov. 1890) [1].

Hab. Mexico, State of Guerrero (*Baron* [1]).

We are indebted to Capt. Casey for a male example of this species. It does not appear to have been met with by any of our collectors in Mexico. The male of *E. gracilis* is deceptively like the same sex of *E. metallicus.*

Epitragus canus (p. 34). (Tab. XXII. fig. 5, ♀.)

To the locality Mexico, add :—Rincon in Guerrero (*H. H. Smith*).

We have now received examples of both sexes of this species, which was described from a single male specimen. *E. canus* proves to be a close ally of *E. littoralis,* but differs from it in both sexes by having the vertex clothed with coarse decumbent whitish hairs, in addition to the usual pubescence. The female has two ridges on the thorax, but these ridges are oblique, not so strongly raised, and (like the median excavation) do not extend so far backwards; the thorax is also much more distinctly punctured in this sex. The hairs on the vertex are as it were longitudinally combed forwards, and do not form a dense, erect tuft as in *E. cristatus.*

Epitragus cupreus (p. 34).

To the localities given, add :—Mexico, Tapachula in Chiapas (*Höge*).

Sent in abundance by Herr Höge from Tapachula, a locality not far from the Guatemalan frontier.

Epitragus lucidus (p. 35).

To the Mexican localities given, add :—Cholula in Puebla (*Höge*).

Numerous examples.

Epitragus obovatus (p. 35).

To the Mexican locality given, add :—La Venta in Guerrero (*H. H. Smith*).

36. **Epitragus ruatanensis.**

Subfusiform, convex, rather broad, castaneous with a slight brassy lustre, shining, very sparsely clothed with short appressed hairs. Head closely, finely punctate anteriorly and on the vertex, more coarsely and sparsely so between the eyes, the lateral lobes divergent and produced in front nearly as far as the epistoma, the supraorbital carina distinct; prothorax strongly transverse, the sides rounded and convergent anteriorly, sinuate behind, the hind angles very acute and directed outwards, the anterior angles rather obtuse, the base with a well-marked rather deep oblique fovea on either side, the surface finely and rather thickly punctured laterally and in front, sparsely so on the disc, the latter with a smooth central line; elytra moderately long, a little rounded at the sides, narrowing from the middle, with the apices somewhat produced and acute, with rows of fine, shallow, approximate punctures, the interstices flat, each with two irregular rows of very fine punctures, which towards the sides are scarcely distinguishable from those of the striæ; beneath thickly punctured, the metasternum coarser punctate laterally, smoother in the middle; the mesosternum V-shaped, and deeply excavate for the reception of the prosternum.

Length 11½ millim.

Hab. HONDURAS, Ruatan Island (*Gaumer*).

One specimen. Larger and broader than *E. godmani* and *E. communis*; the thorax more rounded at the sides anteriorly, with well-marked basal foveæ, the hind angles more acute and directed outwards, the anterior angles obtuse, and the punctuation much finer.

ZOPHERUS (p. 38).

M. Sallé's synonymical note (Col. Hefte, vi. p. 113) on the species of this genus was overlooked by me.

Zopherus chilensis (p. 38).

Zopherus insignis, Blanch. in d'Orbigny's Dict. d'Hist. Nat. xiii. p. 377, Atlas, Ins. Col. t. 7 A. fig. 6.

Zopherus moreletii, Lucas, Ann. Soc. Ent. Fr. 1852, Bull. p. xxiii.

To the Mexican localities given, add:—Tehuantepec (*Höge*).

2. **Zopherus jourdani.**

Zopherus mexicanus (Sol.), huj. op. p. 39 (nec Gray).

Zopherus jourdani, Sallé, Ann. Soc. Ent. Fr. 1849, p. 301, t. 8. fig. 4; Col. Hefte, vi. p. 113.

I have recently examined the type of *Z. mexicanus,* Gray, now in the Hope collection at Oxford, and find that it is specifically distinct from *Z. mexicanus,* Sol.; the name *jourdani,* Sallé, must therefore be retained for this species.

Zopherus lævicollis (p. 40).

To the Mexican localities given, add:—Zacualtipan, Las Vigas, Jalapa (*Höge*).

5 (A). **Zopherus venosus.**

Zopherus lævicollis, var. *venosus,* huj. op. p. 40.

Numerous additional specimens have been received of this insect—from San Andres

Chalchicomula, Amecameca, and Acapulco (*Höge*), and Mochitlan in Guerrero (*Baron*), and I am now convinced that *Z. venosus* should be separated from *Z. lævicollis*.

Zopherus tuberculatus (p. 41).

We have received an additional specimen of this species, from Santo Domingo, Tehuantepec (*Richardson*).

7. **Zopherus mexicanus.**

Zopherus mexicanus, Gray, in Griffith's Animal Kingdom, Append. p. 796, t. 50. fig. 5 (nec Solier).

Zopherus maculatus, huj. op. p. 41.

To the locality Mexico, add:—Zacualtipan in Hidalgo, Mexico city (*Höge*), State of Jalisco (*Richardson*).

The Zacualtipan specimen (like those described by me under the name *maculatus*) agrees well with the type of *Z. mexicanus*, Gray; the one from Jalisco has the tubercles on the elytra much more numerous. The apical tubercles are small, and the suture is a little swollen at the apex, so that, at first sight, the elytra appear to be quadri-tuberculate at the tip. The ventral tubercle is not trilobed in front, as in the closely allied *Z. venosus*.

7 (A). **Zopherus elegans.** (Tab. XXII. fig. 7.)

Zopherus elegans, Horn, Rev. Ten. of Am. north of Mexico, pp. 271, 272 (1870) [1].

Hab. North America, Eastern New Mexico [1].—Mexico, Villa Lerdo and Refugio in Durango (*Höge*).

[1] "Similar in form to *Z. tristis* or *Z. concolor*, but rather more slender; black, subopaque; thorax longer than broad, broader in front, sides moderately rounded and gradually narrowing to base, surface moderately convex, with sparsely placed distinctly muricate punctures, each bearing a scale-like hair, margins with a narrow white space, in which are included moderately elevated, smooth round black tubercles; elytra elongate-oval, narrower than the thorax, moderately convex, and with nine rows of tubercles, more confused and less distinct at the suture, and becoming more rounded, distinct, and distant towards the sides, where there is a narrow band of white containing three of the rows of tubercles; body beneath black and opaque, very sparsely punctured, each puncture with a scale. Length ·60 inch."

Numerous examples from Durango agree well with this description, which was taken from a single specimen captured by Dr. Palmer. The elytral sculpture is, as usual, variable, and the tubercles are sometimes entirely obliterated towards the suture; the thorax also varies in this respect, and the tubercles along the lateral margins are often obsolete.

Zopherus nodulosus (p. 42). (Tab. XXII. fig. 6, var.)

A beautiful variety of this species obtained by Mr. Richardson at Santo Domingo, Tehuantepec, has only about six moderately large, irregular tubercles on each elytron

and the spots on the thorax much reduced in size, the greater part of the surface being yellowish-white. In another variety (?) (fig. 6), of which a single specimen only has been received, from Jalapa (*M. Trujillo*), the smaller tubercles on the elytra and on the lateral portion of the thorax are almost entirely obliterated, and those of the sutural row are reduced in number. Four examples from Tampico (*Richardson*) have, on the contrary, the elytral tubercles, including those of the sutural row, very large and closely placed.

Zopherus haldemani, var. **verrucosus** (p. 43).

To the Mexican locality given, add:—Amula in Guerrero (*H. H. Smith*), Acapulco, Chilpancingo (*Höge*), Mochitlan in Guerrero (*Baron*), San Blas (*Richardson*).

Zopherus nervosus, var. **reticulatus** (p. 43).

Additional specimens of the variety *reticulatus* have been received from Omilteme in Guerrero (*H. H. Smith*), and Mochitlan in Guerrero (*Baron*); in some of these, the large spots on the disc of the elytra are reduced in number and partly confluent.

NOSODERMA (p. 44).

11. **Nosoderma inæquale.**

Eurychora inæqualis, Say, Bost. Journ. Nat. Hist. i. p. 182 (1835)[1]; Complete Writings, ii. p. 655.

Nosoderma morbillosum, Sol. huj. op. p. 48.

Say's name must be retained for this species, it being six years earlier than that of Solier. *E. inæqualis* is omitted from the Munich Catalogue. Say gives[1] Mexico as the locality, and states that the insect occurred in abundance in an elevated situation, under old logs. We have received a large number of specimens from various additional localities in Mexico—Volcan de Ixtaccihuatl (*Richardson*), Volcan de Popocatepetl (*F. D. Godman*), Omilteme (*H. H. Smith*), Mochitlan (*Baron*), &c.

Nosoderma carinatum (p. 48).

To the Mexican localities given, add:—Refugio in Durango (*Höge*).

Nosoderma anceps (p. 50).

To the Mexican localities given, add:—Pine-forest of Popocatepetl (*F. D. Godman*), Amecameca (*Höge*).

ARÆOSCHIZUS (p. 51).

1. **Aræoschizus decipiens.**

Aræoschizus decipiens, Horn, Trans. Am. Ent. Soc. xvii. p. 342 (Nov. 1890)[1].

Aræoschizus costipennis, huj. op. p. 51 (nec Lec.).

Hab. North America, Arizona [1].—Mexico, Northern Sonora (*Morrison*), Villa Lerdo in Durango (*Höge*).

2. Aræoschizus simplex.

Aræoschizus simplex, Casey, Ann. N. York Acad. v. p. 369 (Nov. 1890) [1]; Horn, Trans. Am. Ent. Soc. xvii. p. 341 [2].

Hab. North America, Arizona [1], El Paso [1], Texas [2].—Mexico, Paso del Norte (*Höge*).

3. Aræoschizus mexicanus. (Tab. XXII. fig. 3.)

Obscure castaneous, subopaque. Head considerably longer than broad, dilated in front, parallel at the sides for a short distance behind the eyes, and then gradually, arcuately narrowed to the base, obliquely grooved on either side behind the eyes (the intraocular space appearing longitudinally convex), the intraocular carina short and not extending beyond the eyes, the surface densely, coarsely punctate, and sparsely clothed with coarse scale-like hairs; antennæ very stout, clothed with very coarse scaly hairs; prothorax very much narrower than the head, similarly punctured, slightly longer than broad, the sides a little rounded anteriorly and obliquely converging behind, very feebly sinuate towards the base, the disc with a broad median groove limited on either side by a row of short, coarse, scaly, yellowish hairs, the base, apex, and sides coarsely fimbriate; elytra subparallel from a little below the base to beyond the middle, broadly, obliquely rounded at the shoulders, obliquely narrowed behind, quadricostate, the interstices each with a double row of very coarse impressions, the costæ each with a row of short, coarse, semi-erect, scaly, clavate hairs at their summit; flanks of the prothorax very coarsely, thickly punctate; legs sparsely clothed with coarse scales; femora unarmed.

Length 4 millim.

Hab. Mexico, Tepetlapa (*Flohr*).

One specimen. Closely allied to *A. sulcicollis*, Horn, and *A. fimbriatus*, Casey. It differs from the former (numerous examples of which are before me) by the shorter thorax, the sides of which are very feebly sinuate and coarsely fimbriate, the grooved, more parallel head, and very stout antennæ; and from the latter by the longer head, narrower thorax, shorter elytral hairs, &c.

ASIDA (p. 52).

Of this genus we have received a very large amount of additional material, chiefly from Northern Mexico; and numerous additional species have to be added to the Mexican list. *Tisamenes*, *Ucalegon*, *Poliorcetes*, and *Zamolxis* *, each containing a single species, are connected with *Asida* by intermediate forms, and they can only be treated as sections of that polymorphous genus. If they are retained as distinct, *A. elata*, *A. ingens*, &c. would also have to be separated. *Ologlyptus* has the middle coxal cavities partly closed externally and the trochantin small; it is also connected with *Asida* by intermediate forms.

* Preoccupied in Hemiptera. If retained as distinct, the name *Zaleucus* can be substituted for it.

2. **Asida sordida.**

Pelecyphorus sordidus, Lec. Proc. Acad. Phil. vi. p. 445[1]; Col. of Kansas and Eastern New Mexico, p. 14, t. 1. fig. 11[2].
Asida sordida, Horn, Rev. Ten. of Am. north of Mexico, p. 283[3].
Pelecyphorus æger, Lec. Journ. Acad. Phil. iv. (2) p. 19[4].
Pelecyphorus irregularis, Lec. loc. cit. p. 19[5].
Pelecyphorus costipennis, Lec. loc. cit. p. 20[6].
Asida rugosissima, huj. op. p. 53, Tab. III. fig. 1.
Asida interrupta, huj. op. p. 53.

To the localities given, add:—North America, Arkansas River[1 2], Texas[4 5], New Mexico[2 3], Arizona[6].—Mexico, Chihuahua (*Montague Kerr*), Chihuahua city, Santa Clara in Chihuahua (*Höge*).

The numerous additional specimens obtained by Herr Höge in Northern Mexico connect *A. rugosissima* and *A. interrupta* with the variable *A. sordida,* Lec., and they cannot be retained as distinct. The Mexican examples are very robust and have the transverse wrinkles on the elytra exceedingly coarse. The thorax varies in shape, the base being sometimes strongly bisinuate and the hind angles prolonged backwards. The only North-American specimens I have seen as yet are smoother than usual.

Asida clathrata (p. 54).

Var. *Asida funesta,* huj. op. p. 53.

To the Mexican localities given, add:—Chilpancingo in Guerrero (*H. H. Smith*), Mochitlan (*Baron*), Matamoros Izucar, Atlixco, and Cholula, all in Puebla (*Höge*).

Sent in abundance by Herr Höge from various places in the State of Puebla, also from Cuernavaca. *A. funesta* is an extreme variety of the same species, from which it differs in having the disc of the thorax unimpressed, and the inner dorsal ridge on each elytron strongly raised.

Asida asidoides (p. 54).

To the locality Mexico, add:—Tula and Zimapan in Hidalgo (*Höge*).

Two specimens.

8 (A). **Asida geminata.** (Tab. XXII. fig. 8, ♀.)

Rather broad, black, or pitchy-ferruginous, opaque, the entire upper surface sparsely clothed with short, brownish, fine, appressed scaly hairs. Head transversely depressed in front, rather coarsely punctured; prothorax broader than long, much narrower at the apex than at the base, the apex deeply emarginate, the sides rounded anteriorly and strongly sinuate behind, the hind angles greatly produced and outwardly directed, the anterior angles very prominent but rather obtuse, the lateral margins thickened and slightly

reflexed, the base feebly sinuate on either side, the surface densely, very irregularly punctate, the punctures much coarser and more or less confluent on the middle of the disc behind, the disc usually with an irregular, smooth, raised median line towards the base, and two oblique smooth spaces on either side; elytra the width of, or very little wider than, the prothorax at the base in the male, broader and more dilated in the female, rather abruptly declivous behind, with a strongly thickened marginal carina extending from the obtuse (or moderately prominent) humeri nearly to the apex, and three irregular, feebly raised, almost smooth costæ on the disc—the inner two very broad, and each formed by two anastomosing lines (which are sometimes only connected by transverse elevations), the interspaces (the sutural one excepted) here and there transversely wrinkled, coarsely so in some specimens, the base more or less obliquely sloping towards the humeri, the depressions of the surface clothed with scaly hairs; the entire under surface very finely, sparsely punctate, each puncture with a scaly hair; prosternum declivous behind, concave in the middle between the coxæ; anterior tibiæ with a short spur at the tip.

Length 13–18, breadth 7–10 millim. (♂ ♀.)

Hab. Mexico, Villa Lerdo in Durango, Santa Clara in Chihuahua, Chihuahua city (*Höge*).

Sent in abundance from Villa Lerdo. Allied to *A. opaca*, *A. forreri*, and *A. mancipata*, but differing from all of them in various particulars. The hind angles of the thorax are unusually prominent, and the base of the elytra slopes more or less obliquely towards the humeri; the humeri are obtuse in some examples, prominent and reflexed in others. The elytral sculpture is difficult to describe: in some specimens the inner costæ are each formed by two irregular raised lines, which are partly connected by transverse or oblique elevations; in others (two from Chihuahua) the costæ are almost obliterated, and replaced by irregular transverse wrinkles.

8 (b). **Asida mancipata.**

Asida mancipata, Horn, Trans. Am. Ent. Soc. vii. p. 56 [1].

Hab. North America, New Mexico [1].—Mexico, Chihuahua city (*Höge*).

Two specimens.

8 (c). **Asida intricata.** (Tab. XXII. fig. 9.)

Broad, rather short, depressed, opaque, black; the elytra somewhat thickly, the prothorax sparingly, clothed with short, appressed, scaly, yellowish-brown hairs, the head with longer hairs. Prothorax broader than long, very deeply emarginate at the apex, a little rounded at the sides anteriorly, gradually narrowing in front, slightly narrowed behind, the lateral margins strongly thickened and slightly raised, but not grooved within, the anterior and hind angles obtuse but very strongly produced, the latter overlapping the base of the elytra, the base strongly sinuate on either side and feebly so in the middle, the surface very shallowly, rather finely punctate, the punctures each with a scaly hair and separated by fine, raised lines, which towards the sides become coarser and more transverse, the disc with an interrupted smooth median line and two smooth spots on either side; elytra much wider than the prothorax, a little rounded at the sides, widest at the middle, produced at the apex, flattened on the disc, and with a thickened and reflexed marginal carina extending from the very prominent humeri nearly to the apex, the disc with a network of fine, raised, irregular, smooth, anastomosing lines apparently radiating from two longitudinal series, the interspaces filled with appressed short scaly hairs, the base sinuate on either side, and excavate within for the reception of the hind angles of the prothorax: beneath slightly shining, very sparsely, finely punctate, each puncture with a scaly hair; prosternum very broadly, subhorizontally produced,

the mesosternum slightly excavate for its reception; anterior tibiæ with a short, sharp tooth at the apex.

Length 17, breadth 9 millim. (♀.)

Hab. Mexico. State of Jalisco (*Richardson*).

One female example. Allied to *A. forreri*, *A. opaca*, &c. The thorax is narrowed behind, and has the lateral margins considerably thickened; the anterior and hind angles are greatly produced though obtuse, the base of the elytra being excavate for the reception of the latter.

Asida foveolata (p. 55).

To the Mexican localities given, add:—Tehuantepec (*Höge*).

Sent in plenty from the Isthmus of Tehuantepec.

Asida suturalis (p. 55).

To the Mexican localities given, add:—Mexico city (*Höge*).

Found in numbers by Herr Höge in the neighbourhood of the city of Mexico. In three of these specimens the sides of the thorax and the sides and suture of the elytra are ferruginous.

13 (a). **Asida spinimanus.** (Tab. XXII. fig. 11.)

Oblong-oval, moderately broad, depressed, obscure reddish-brown or piceous, opaque, somewhat thickly clothed with short, fine, appressed yellowish hairs, the elytra with intermixed very short semi-erect hairs. Head finely, somewhat thickly punctate; prothorax strongly transverse, much wider at the base than at the apex, the sides rounded at the middle and obliquely converging in front and behind, the apex deeply emarginate, the anterior angles acute and prominent, the hind angles subrectangular, the base broadly truncate in the middle, slightly sinuate on either side, the disc feebly transversely convex, closely, finely punctate, and sometimes with a smooth central line, the lateral margins rather broadly expanded, thin, a little raised, and more coarsely punctured; elytra broadly oval, depressed, a little rounded at the sides in front, wider than the prothorax, truncate at the base, without marginal carina, the humeri obtuse and feebly reflexed, the disc sometimes with traces of one or two longitudinal ridges towards the sides, the entire surface very finely, sparsely punctate, the suture sometimes with a distinct row of coarser punctures on either side; beneath sparsely punctured, the punctures on the ventral segments very fine, each bearing a decumbent yellowish hair; prosternum declivous behind; anterior tibiæ with a very long curved spine at the apex, coarsely denticulate on their outer edge.

Length 10–14, breadth 5–7 millim.

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

Sent in abundance by Herr Höge. This insect is perhaps nearest allied to *Ologlyptus bicarinatus*, which would be better placed in *Asida* (near *A. induta*); the trochantin of the middle coxæ is moderately prominent in both species. The anterior tibiæ, as in *A. horrida*, have a very long curved spine at the apex. The thorax is strongly transverse, broad behind; the elytra are depressed, truncate at the base, and without marginal or other carinæ. The pubescence is easily abraded.

13 (B). **Asida tenebrosa.** (Tab. XXII. fig. 12.)

Oblong-oval, rather broad, depressed, dull black, almost glabrous. Head sparsely, finely punctate between the eyes, more coarsely so in front; prothorax much broader than long, wider at the base than at the apex, the sides rounded at the middle, obliquely converging in front, and converging behind, the disc feebly transversely convex, sparsely, finely punctate, the base, apex, and lateral portion coarsely punctate, the margins horizontally expanded, thin, the apex deeply emarginate, the anterior angles sharply produced in front, the base broadly subtruncate, feebly emarginate in the middle, the hind angles subrectangular; elytra a little rounded at the sides, widest at the middle, the width of the prothorax at the base, with a marginal carina extending from the obtuse humeri to about one-third from the apex, and three indistinct longitudinal ridges on the disc, the rest of the surface with very shallow, scattered, coarse punctures and shallow, irregular, transverse or oblique wrinkles, each puncture with a yellowish scale, the base broadly truncate, the sutural region flat: beneath very sparsely punctate, the ventral surface finely scabrous, distinctly punctured at the sides and apex; prosternum grooved between the coxæ, declivous behind: anterior tibiæ denticulate on their outer edge, and with a long spine at the apex.

Length 15½, breadth 7½ millim.

Hab. MEXICO, Saltillo in Coahuila (*Höge*).

One specimen. Allied to *A. spinimanus*. The surface is glabrous, except that each puncture bears a yellowish scale.

14 (A). **Asida fasciculata.** (Tab. XXII. fig. 21.)

Black, opaque, thickly clothed with pale brown, appressed scaly hairs, the elytra with scattered fascicles of short, coarse, dark brown erect hairs. Head coarsely, confluently punctate; prothorax feebly transversely convex, broader than long, not wider at the base than at the apex, the sides rounded at the middle, obliquely converging in front, and strongly sinuate behind, the anterior angles prominent, the apex deeply emarginate, the hind angles produced behind and overlapping the elytra, the base truncate in the middle and slightly sinuate on either side, the lateral margins thickened and a little raised, the surface coarsely, confluently punctate, the disc with a sharp median carina; elytra much wider than the prothorax at the base, widening to beyond the middle, abruptly narrowed behind, with a stout, undulating, marginal carina extending from the obtuse humeri nearly to the apex and a shorter very sinuous carina near the middle of the disc, the latter curving inwards towards the suture behind, and with an oblique ramus on the inner side at the base, the space between the suture and the dorsal carina flattened, the lateral portion uneven, the surface with coarse, scattered punctures and scattered fascicles of erect darker hairs; beneath coarsely, sparsely punctate, each puncture with a bristly decumbent hair; prosternum exceedingly broad, slightly produced, declivous behind; legs very roughly punctured, the anterior tibiæ with a short tooth at the apex.

Length 12–15½ millim.

Hab. MEXICO, Cuernavaca (*Flohr, Höge*).

Four examples. Closely allied to *A. guanajuatensis*, and, like that species, almost as well placed in *Ologlyptus* as in *Asida*, the trochantin of the middle coxæ being moderately prominent. The thorax is more constricted at the sides behind than in *A. guanajuatensis* and has a sharp median carina; the elytra are carinate at the sides and have a sinuous, irregular, dorsal carina, the surface being clothed with scattered fascicles of dark brown hairs, which towards the sides are placed upon transverse or oblique elevations connected with the carinæ. *A. fasciculata* closely resembles *Astrotus regularis*.

Asida scutellaris (p. 57).

To the Mexican localities given, add :—Refugio, Salazar, Mexico city (*Höge*).

Sent in plenty from Salazar. In the four specimens from Refugio the lateral margins of the thorax are raised and more thickened than usual. *A. scutellaris* approaches very closely to *A. fallax*, but may be known from it by the much stouter and more regular elytral costæ, the costæ not connected by transverse raised lines.

Asida fallax (p. 57).

Var. *Asida favosa*, huj. op. p. 58.
Var. *Asida similata*, huj. op. p. 58.

To the Mexican localities given, add :—Tula, Cholula (*Höge*), Real del Monte (*Höge*, *Richardson*).

Sent in abundance by Herr Höge from Toluca and Mexico city. *A. favosa* and *A. similata* are, as I suspected, varieties of *A. fallax*.

Asida laticollis (p. 58).

To the Mexican locality given, add :—Refugio in Durango, Durango city (*Höge*).

Eight additional examples have been received of this species. *A. laticollis* differs constantly from *A. scutellaris* and *A. fallax* in the much finer sculpture of the thorax.

Asida dispar (p. 59).

Asida dissimilis, huj. op. p. 59 (nec Allard).

To the locality Mexico, add :—Durango city (*Höge*).

Three specimens were obtained by Herr Höge.

Var. The elytral costæ separate throughout.

Hab. Mexico, Santa Clara in Chihuahua (*Höge*).

One specimen. The name *dissimilis* having been used by Allard for another species of the same genus, it is advisable to make the above change.

20 (A). **Asida flohri.** (Tab. XXII. fig. 10.)

Very elongate, rather narrow, flattened above, black, slightly shining, glabrous. Head deeply transversely depressed in front, sparsely, coarsely, very irregularly punctate; prothorax broader than long, moderately rounded at the sides anteriorly, narrowed and sinuate behind, deeply emarginate at the apex, the anterior angles produced but obtuse, the hind angles very prominent and produced behind, the base broadly subtruncate in the middle and feebly sinuate towards the sides, the lateral margins much thickened, slightly raised above, strongly deflexed beneath, the surface very coarsely, sparsely, deeply punctate towards the sides, much more finely so on the middle of the disc; elytra very elongate, subparallel, narrower than the prothorax, a little narrowed towards the base, with a thickened, slightly raised marginal carina extending from the rounded humeri nearly to the apex, the base truncate, obliquely wrinkled within, the disc

flattened, the lateral portion slightly depressed, the surface almost smooth, opaque towards the sides and apex, the epipleuræ towards the apex separated from the flanks by a sharp carina; beneath shining, the flanks of the prothorax, and the pro- and mesosternum exceedingly coarsely punctate, the metasternum and venter very sparsely, more finely punctate; prosternum rounded and declivous behind, slightly produced; legs very coarsely punctured, sparsely pubescent; anterior tibiæ with a short blunt tooth at the tip.
Length 19½, breadth (elytra) 6½ millim. (♂.)

Hab. Mexico, Zapotlan (*Flohr*).

One example. In this species the elytra are very elongate, subparallel, and narrower than the thorax, at least in the male sex; the hind angles of the thorax are very prominent and produced behind, external to the rounded humeri of the elytra. *A. flohri* has a different facies from any other Mexican species of the genus.

21 (A). **Asida moricoides.** (Tab. XXII. fig. 14.)

Elongate, broad, dull black, glabrous. Head sparsely, rather coarsely punctate; prothorax broader than long, the sides rounded at the middle, obliquely converging in front, and sinuous and converging behind, the hind angles acute and prominent, the anterior angles strongly, triangularly produced in front, acute, the apex deeply emarginate, the base slightly sinuate on either side, the disc very feebly convex and sparsely very finely punctate (almost smooth in some specimens), the lateral portion coarsely, more or less confluently punctured, the margins moderately raised and crenulate, broadly expanded, thin; elytra moderately long, flattened on the disc, the width of the prothorax at the base in the male, broader in the female, narrowing a little in front, widest beyond the middle, with a thickened, crenulated, and reflexed marginal carina extending from the humeri nearly to the apex, and two shorter carinæ on the disc—the inner one usually fainter than the other and sometimes obsolete, the rest of the surface with fine scattered punctures and shallow transverse wrinkles—sometimes almost smooth, sometimes more coarsely wrinkled, the humeri reflexed and moderately prominent, the epipleuræ in their apical third separated from the flanks by a sharp carina; beneath sparsely, finely punctate, the entire ventral surface finely scabrous and without distinct punctures; prosternum declivous and grooved behind; anterior tibiæ with a sharp tooth at the tip, denticulate on their outer edge.
Length 18–25, breadth 10–14 millim. (♂ ♀.)

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

Sent in abundance by Herr Höge. It is perhaps nearest allied to *A. obsoleta* and *A. muricatula*, Lec.

21 (B). **Asida obliterata.**

Closely allied to *A. moricoides*, and differing as follows:—The elytra more convex, the marginal carina shorter and less distinct, the other carinæ obsolete, the punctuation a little coarser.
Length 20–26, breadth 9½–12½ millim. (♂ ♀.)

Hab. Mexico, Paso del Norte (*Höge*).

Many specimens. This is probably a varietal form of *A. moricoides*; nevertheless it is advisable to name it.

21 (C). **Asida segregata.**

Closely allied to *A. moricoides*, and differing as follows:—The elytra with the marginal carina extending to about one-third from the apex (in one specimen abbreviated and only extending to a little below the humeri), he other carinæ obsolete, sparsely, coarsely punctate, the punctures towards the suture and the anterior

portion of the disc finer and more scattered, the epipleuræ also with scattered coarsish punctures; beneath coarsely punctate, the ventral surface also sparsely and distinctly, in some specimens rather coarsely, punctured, the punctures usually coarser towards the sides.

Length 23–26, breadth 10½–13 millim. (♂ ♀.)

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

Eight examples. *A. segregata* and *A. obliterata* differ from *A. palmeri* in having the lateral margins of the thorax less reflexed and more shallowly grooved within, the disc very much more finely punctured, and the anterior angles more produced; *A. segregata* also has the elytra more coarsely and closely punctured than in that species.

21 (D). **Asida fœda.** (Tab. XXII. fig. 16.)

Very robust, rather elongate, broad, black, the head and prothorax opaque, the elytra shining, glabrous. Head very sparsely, rather coarsely punctate; prothorax very wide, broader than long, much narrower at the apex than at the base, the sides rounded at the middle, obliquely converging in front, and sinuate before the base and apex, the apex deeply emarginate, the anterior angles strongly, triangularly produced, acute, the hind angles acutely produced and extending a little backwards, the base subtruncate at the middle and without median lobe, the disc feebly convex, almost smooth, or, at most, very sparsely, minutely punctate, the lateral portion with coarse scattered punctures, the margins very broadly expanded, transversely wrinkled and shallowly grooved within; elytra convex, rather elongate, the width of, or very little wider than, the prothorax at the base, subparallel in their basal half, or very slightly widened towards the middle, with a prominent humeral callus, which is not continued downwards in the form of a marginal carina and is slightly excavate within for the reception of the hind angles of the prothorax, the surface, including the flanks, sparsely, coarsely punctate, the basal portion of the disc sometimes with finer punctures, the epipleuræ at the apex separated from the flanks by a sharp carina; beneath sparsely, coarsely punctate, the ventral surface finely scabrous, with fine scattered punctures and shallow longitudinal wrinkles; prosternum rounded and declivous behind; anterior tibiæ sharply toothed at the apex, rather coarsely denticulate on their outer edge.

Length 20–29, breadth 10–14 millim. (♂ ♀.)

Hab. Mexico, Villa Lerdo in Durango, Saltillo in Coahuila (*Höge*).

Sent in abundance from Villa Lerdo. More parallel than *A. segregata* and *A. palmeri*; the thorax relatively broader, with the lateral margins more broadly expanded and the hind angles more produced and extending a little backwards; the elytra less dilated behind, more regularly convex, with a prominent humeral callus, but no trace of a marginal carina. The disc of the thorax is almost smooth, or, at most, very sparsely, minutely punctate.

21 (E). **Asida tarda.** (Tab. XXII. fig. 17.)

Very broad, short, dull black, glabrous. Head shallowly, transversely depressed in front, sparsely, rather coarsely punctate; prothorax broader than long, moderately rounded at the sides, the latter sinuate and slightly converging behind, the hind angles prominent, rectangular, and outwardly directed, the apex deeply emarginate, the anterior angles triangularly produced in front, the disc feebly convex, sparsely, finely punctate, the lateral portion with very coarse scattered punctures, the margins thickened, rather broadly expanded, and shallowly grooved within, the base truncate, without median lobe; elytra short, moderately convex, wider than the prothorax, a little rounded at the sides, widest at the middle, with a raised marginal carina extending from the very prominent obtuse humeri (which are excavate within for

the reception of the hind angles of the prothorax) to about one-third from the apex, the base carinate and quite straight, the apical portion somewhat abruptly declivous, the entire surface, including the flanks, sparsely, coarsely punctate; beneath sparsely, coarsely punctured, the ventral surface finely scabrous and with scattered fine punctures, which towards the sides become much coarser; prosternum very broad, declivous behind; anterior tibiæ denticulate on their outer edge, with a long, sharp, stout tooth at the apex.

Length 20, breadth 11 millim.

Hab. Mexico, Saltillo in Coahuila (*Höge*).

One example. This species somewhat resembles *A. latissima*, but is shorter and has a very differently formed thorax. The thorax and elytra are very broadly truncate at the base; the humeri are strongly raised but obtuse, and excavate within for the reception of the hind angles of the thorax.

23. Asida collaris.

Asida marginicollis, huj. op. p. 60 (nec Rosenh.).

To the Mexican locality given, add:—Lagos, Aguas Calientes city (*Höge*).

The three specimens described are all females. The male is narrower and more parallel; it greatly resembles some of the Mexican species of *Calosoma*. *A. lata*, females only of which are known, is perhaps an extreme form of *A. collaris*.

23 (A). Asida furcata. (Tab. XXII. fig. 15.)

Elongate-oval, brownish-black, opaque, the head and prothorax with a few very short, fine, decumbent hairs, the elytra glabrous. Head sparsely, rather finely punctate; prothorax broader than long, a little rounded at the sides, narrowed in front and behind, scarcely narrower at the apex than at the base, the disc transversely convex, declivous behind, and sparsely, very finely punctate, the interspaces densely, exceedingly minutely punctate, the lateral margins slightly crenulate, expanded, reflexed, and grooved and coarsely punctured within, the anterior angles acutely produced in front, the hind angles subrectangular, the base feebly trisinuate, the apex crenulate and with some coarsish punctures; elytra the width of the prothorax at the base, a little rounded at the sides, rapidly widening to beyond the middle, with the apex somewhat produced, slightly emarginate at the base, with an acutely raised marginal ridge extending from the subacute humeri almost to the apex, an acute carina extending inwards from this at about one-third from the base, and a curved, sharp, median carina extending from the base downwards and parallel with the second posteriorly, the rest of the surface with scattered, irregularly arranged, fine, conical elevations, the space between the median carina and the suture flat, the epipleuræ not separated from the flanks by a sharp carina at the apex, the flanks sparsely, rather coarsely punctate; the ventral surface densely, exceedingly minutely punctate, with scattered fine punctures, the flanks of the prothorax with some rather coarse muricate impressions; prosternum broadly longitudinally excavate between the coxæ, declivous behind; anterior tibiæ with a short tooth at the tip.

Length 15, breadth $7\frac{2}{3}$ millim.

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

One example. Probably an ally of *A. bifurca*, Lec., from Cape San Lucas. The only Mexican species approaching it is *A. unicostata*. The median carina on the elytra is curved inwards towards the suture behind and there parallel with the branch

of the marginal one; the fine, conical, irregularly arranged elevations on the elytra resemble punctures at first sight.

23 (B). **Asida latissima.** (Tab. XXII. fig. 18.)

Very broad, oblong-oval, black, shining, almost glabrous. Head deeply, transversely impressed in front, sparsely, rather coarsely punctate; prothorax broader than long, strongly rounded at the sides, moderately narrowed in front, deeply emarginate at the apex, the disc transversely convex, sparsely, minutely punctate, the lateral margins crenulate, broadly expanded, rather thin, and very deeply grooved and transversely wrinkled within, the anterior angles sharply triangular, the hind angles almost rounded, the base transversely depressed in the middle and somewhat rounded; elytra the width of the prothorax at the base, rounded at the sides, widening to the middle, transversely convex, with a very sharply raised marginal carina extending from the obtuse but prominent humeri to a short distance from the apex, the base shallowly emarginate, the entire surface sparsely, coarsely punctate; beneath sparsely, finely punctate, the ventral surface also longitudinally wrinkled; prosternum grooved in the middle between the coxæ, declivous behind; anterior tibiæ sharply toothed at the apex.

Length 23, breadth 13 millim.

Hab. MEXICO, Villa Lerdo in Durango (*Höge*).

One example. Belongs to the *Euschides*-group, but broader than any of the allied species known to me. The lateral margins of the thorax are broadly expanded, and very deeply grooved and transversely wrinkled within.

24 (A). **Asida horrida.** (Tab. XXII. fig. 13.)

Oblong-oval, rather broad, pitchy-brown, opaque, thickly clothed with yellowish decumbent hairs, the elytra with intermixed long, erect, bristly hairs. Head thickly, coarsely punctate; prothorax broader than long, narrower at the apex than at the base, the sides strongly rounded at the middle, obliquely converging in front and behind, the apex deeply emarginate, the anterior angles produced in front, the hind angles distinct but not prominent, the base rounded, transversely depressed in the middle, the disc strongly transversely convex, coarsely, rather thickly punctate, and with indications of an impressed median line, the lateral margins reflexed and crenulate, rather broadly expanded, somewhat deeply grooved within; elytra a little wider than the prothorax, flattened on the disc, subparallel in their median third, slightly narrowed in front and abruptly narrowed behind, emarginate at the base, with a sharp lateral carina, which bifurcates a little below the shoulder, and extends to within a short distance of the apex, and two shorter, parallel carinæ on the disc—the inner carina faint, the others surmounted by a series of tubercular elevations, each of which bears an erect bristly hair,—the interspaces with scattered rather coarse punctures and small conical elevations, the former bearing decumbent hairs and the latter erect bristles, the humeri thickened and reflexed, but obtuse; the entire under surface very coarsely, thickly punctate, each puncture bearing a decumbent bristly hair; prosternum declivous behind; legs very roughly punctured; anterior tibiæ with a very long curved spine at the apex, denticulate on their outer edge.

Length 12½–16, breadth 6½–8½ millim.

Hab. MEXICO, Nuevo Laredo in Tamaulipas (*Höge*).

Five specimens, from just within our northern boundary. This insect is very distinct from any other Mexican species of the genus known to me; it comes nearest to *A. villosa* *. *A. puncticollis*, Lec. (nec Sol.), is an allied form, but it has not costate elytra.

* Specimens of *A. horrida*, *A. fœda*, *A. obliterata*, *A. moricoides*, and *A. geminata* have been examined by Dr. Horn, who informs me that they are all unknown to him.

24 (B). **Asida unicostata.** (Tab. XXII. fig. 19.)

Elongate-oval, black, opaque, very sparsely clothed with fine, appressed (easily abraded), yellowish scaly hairs. Head coarsely, sparsely punctate, smoother between the eyes; prothorax broader than long, rounded at the sides, moderately narrowed in front, and a little narrowed behind, the disc transversely convex and almost smooth, the lateral margins crenulate, broadly expanded, thin, and somewhat deeply grooved within, the anterior angles triangularly produced, the hind angles rectangular, the base trisinuate and deeply, transversely depressed in the middle, the median lobe very broad and produced on either side behind: elytra moderately elongate, the width of the prothorax at the base, gradually widened to beyond the middle, and with the apex produced, subtruncate at the base, with a sharply raised marginal carina extending from the subdentiform humeri nearly to the apex, and a strongly raised shorter and stouter median ridge, the space between the median carina and the suture smooth and flat, that between it and the marginal carina sloping, more distinctly pubescent, and with two rows of scattered, smooth, rather coarse granular elevations—one, median, placed posteriorly upon a faint carina, the other more irregular, close to the margin, the epipleuræ towards the apex separated from the flanks by a sharp carina, a short row of granular elevations below the apical portion of the marginal carina; the ventral surface opaque, finely scabrous, and with some widely scattered fine punctures; prosternum rounded and declivous behind not produced: anterior tibiæ with a sharp tooth at the apex.

Length 19, breadth 9 millim.

Hab. MEXICO, Venta de Zopilote in Guerrero 2800 feet (*H. H. Smith*).

One specimen only of this curious species has been received.

25 (A). **Asida marginata.**

Pelecyphorus marginatus, Lec. Ann. Lyc. New York, v. p. 128[1].
Asida marginata, Horn, Rev. Ten. of Am. north of Mexico, p. 288[2].
Pelecyphorus rimatus, Lec. Proc. Acad. Phil. vii. p. 223[3].
Philolithus rimatus, Lacord. Gen. Col. v. p. 158, nota[4].

Hab. NORTH AMERICA[1], desert regions bordering the Gila River of Arizona[1 2], Mexican boundary[3].—MEXICO, Northern Sonora (*Morrison*), Paso del Norte (*Höge*).

Asida difficilis (p. 61).

To the Mexican localities given, add:—Tula in Hidalgo (*Höge*).

Sent in abundance by Herr Höge. *A. difficilis* seems to be perfectly distinct from *A. pubescens*. The anterior angles of the thorax are very acute.

Asida costata (p. 62).

Asida costata (Sol.), huj. op. p. 62 (nec Fisch., 1843).

To the locality Mexico, add:—Tenango del Valle (*Richardson*), Toluca, Jalapa (*Höge*).

Sent in plenty by Mr. Richardson. In a specimen received from Herr Höge, labelled (perhaps incorrectly) as from Jalapa, the elytral costæ are less raised than usual.

Asida obovata (p. 63).

To the Mexican locality given, add:—Paso del Norte in Chihuahua (*Höge*).

Asida blapsoides (p. 63).

To the Mexican localities given, add:—Zapotlan in Colima, Guadalajara, Toluca (*Höge*), Amecameca (*Flohr*), Volcan de Ixtaccihuatl 11,500 feet (*Richardson*).

A very close ally of *A. obovata* and *A. convexa*, Lec., but differing from both of them in the less reflexed margins of the thorax, the anterior angles of which are more obtuse. The coarsely punctured specimens referred by me to this species, of which we have received but few as yet, will probably have to be separated; these include two forms—one with, the other without, a marginal carina to the elytra.

Asida blanda (p. 63).

To the Mexican locality given, add:—Aguas Calientes city, Lagos (*Höge*).

Distinct from *A. blapsoides* in all its varieties by the more thickened and reflexed lateral margins of the thorax; *A. obovata* has the thoracic margins more narrowly reflexed.

Asida sphæricollis (p. 64).

To the Mexican locality given, add:—Aguas Calientes city (*Höge*).

Two specimens.

36. **Asida convexicollis.**

Euschides convexicollis, Lec. Proc. Acad. Phil. vii. p. 224 [1].
Asida convexicollis, Horn, Rev. Ten. of Am. north of Mexico, p. 288 (nec Allard) [2].

Hab. North America, Arizona [2], Mexican boundary [1].—Mexico, Paso del Norte, Chihuahua city (*Höge*), Chihuahua and Durango [1].

Sent in numbers from Chihuahua by Herr Höge.

37. **Asida elata.**

Pelecyphorus elatus, Lec. Proc. Acad. Phil. vi. p. 445 [1]; Thoms. Arcana Naturæ, p. 125, t. 12. fig. 7 [2].
Philolithus elatus, Lacord. Gen. Col. v. p. 158, nota [3].
Asida elata, Horn, Rev. Ten. of Am. north of Mexico, p. 289 [4].
Pelecyphorus difformis, Lec. Proc. Acad. Phil. vii. p. 223 [5].
Philolithus difformis, Lacord. Gen. Col. v. p. 158, nota [6].

Hab. North America, Oregon to Texas, Mexican boundary [1 5].—Mexico, Paso del Norte (*Höge*).

Three specimens of this peculiar species have been received from within our limits.

38. **Asida ingens.** (Tab. XXII. fig. 20.)

Very broad and robust, moderately elongate, black, the head and prothorax opaque, very sparsely pubescent, the elytra slightly shining, glabrous. Head deflexed, rugosely punctured; eyes small, transversely oval, not extending beneath the head; prothorax transversely convex, much broader than long, only a little wider at the base than at the apex, widest before the middle, greatly dilated at the sides, the latter strongly rounded anteriorly, obliquely converging behind, and abruptly narrowed in front, the margins crenate and raised, the apex moderately emarginate, the base truncate, the anterior angles distinct but obtuse, the hind angles obtuse, the entire surface very rugosely punctured; elytra narrower than the prothorax at the base, rapidly widening to beyond the middle, abruptly narrowed and abruptly declivous behind, truncate at the base, and produced at the apex, with an undulating marginal carina extending from the outwardly-directed dentiform humeri to about one-fourth from the apex, and two coarse very sinuous carinæ on the disc, the interspaces with very coarse, transverse, irregular elevations, those along the suture more regularly arranged, the flanks with numerous granular elevations; beneath coarsely, shallowly, rather closely punctate; prosternum very broad, declivous behind; legs very stout; anterior tibiæ with a moderately long tooth at the outer apical angle.

Length 25½–26½, breadth 14½–15 millim.

Hab. Mexico, San Isidro in Coahuila (*Höge*).

Two specimens of this very large species have been obtained. The elytral sculpture resembles that of *A. sordida*. The thorax is very strongly, arcuately dilated anteriorly and obliquely narrowed behind; the elytra are narrowed and truncate at the base, the humeri dentiform and outwardly directed. In its small, transversely-oval eyes, deflexed head, stout limbs, &c., *A. ingens* approaches *A.* (*Tisamenes*) *truquii*.

MICROSCHATIA (p. 66).

Microschatia punctata (p. 66).

Var. The elytra each with three irregular raised lines or costæ, the punctuation much coarser and partly confluent; the sides and apex of the abdomen sparsely, coarsely punctate.

Hab. Mexico, Zimapan in Hidalgo (*Höge*).

Sent in abundance by Herr Höge. *M. punctata* has been recorded by Dr. Horn (Rev. Ten. of Am. north of Mexico, p. 282) as from Lower California, but it is not improbable that his insect belongs to another species; neither in the typical form nor in the above-described variety can the thorax be described as "smooth," the disc being always very coarsely, sparsely punctate.

ASTROTUS (p. 66).

1 (a). **Astrotus regularis.**

Astrotus regularis, Horn, Rev. Ten. of Am. north of Mexico, p. 290[1].

Hab. North America, Texas[1].—Mexico, Nuevo Laredo in Tamaulipas (*Höge*).

Six specimens, agreeing perfectly with others from Texas in Mr. F. Bates's collection.

Astrotus seticornis (p. 67).

To the Mexican locality given, add :—Salazar (*Höge*).

Six specimens.

4. **Astrotus undatus.** (Tab. XXII. fig. 25.)

Oblong-oval, flattened above, piceous or pitchy-brown, opaque, sparsely clothed with rather long, decumbent, scaly hairs. Head coarsely, thickly punctured; antennæ moderately slender, clothed with very long setæ, the intermediate joints longer than broad, ovate, the tenth strongly widened; prothorax broader than long, not wider at the base than at the apex, the sides rounded at the middle, converging in front and behind, and sinuate before the base, the latter truncate, the apex deeply emarginate, the anterior angles sharp, the hind angles rectangular, the lateral margins expanded and raised, shallowly grooved within, the surface coarsely, thickly punctate, the disc with a smooth median line and usually with one or two irregular depressions on either side; elytra flattened, widest beyond the middle, gradually narrowing anteriorly, and strongly produced at the apex, with a serrate, sharply raised, marginal carina extending from the rounded humeri nearly to the apex, and numerous very irregular transverse or oblique raised lines and points, which become more distinct beyond the middle, the interspaces and epipleuræ with fine, deep, scattered punctures; beneath slightly shining, coarsely punctate, the punctures on the venter finer and submuricate, each bearing a decumbent yellowish hair: prosternum declivous behind; middle coxal cavities almost closed externally; anterior tibiæ with a short tooth at the apex.

Length $8\frac{1}{2}$–$13\frac{1}{2}$, breadth $3\frac{1}{2}$–6 millim. (♂ ♀.)

Hab. Mexico, Ventanas in Durango (*Höge*).

Numerous examples, all in very clean condition. Allied to *A. seticornis*, but differing from it in the truncate base of the thorax, the less oblique humeri, and the stouter antennæ; the elevations on the elytra are less distinct and more interrupted, the hairs are longer and coarser, and the punctuation is very sparse. The following is also an allied form.

5. **Astrotus erosus.**

Oblong-oval, black, thickly covered with a brownish agglutinated earthy coating; the prothorax with short, decumbent scaly hairs; the elytral elevations surmounted by fascicles of very coarse semi-erect hairs, the marginal carina with similar hairs. Head thickly punctured; antennæ short, slender, clothed with very long setæ, the intermediate joints longer than wide, ovate, the tenth greatly widened; prothorax transverse, scarcely wider at the base than at the apex, narrowed in front and behind, and slightly sinuate before the base, the latter truncate, the hind angles subrectangular, the apex rather deeply emarginate, the anterior angles sharp, the disc feebly convex, the lateral margins raised, shallowly grooved within, the surface thickly punctured, the disc (apparently) with a smooth median line; elytra widest beyond the middle, a little rounded at the sides, narrowed in front, and produced at the apex, with a marginal carina extending from the broadly rounded humeri nearly to the apex, a short median carina at the base, and some oblique, partly coalescent, raised lines and points, the rest of the surface and the epipleuræ coarsely, sparsely punctate; beneath closely and coarsely punctured, the punctures on the venter finer and muricate; prosternum declivous behind; middle coxal cavities almost closed externally; anterior tibiæ with a rather long tooth at the apex.

Length 10, breadth $4\frac{1}{2}$ millim.

Hab. Mexico, San Juan de los Llanos (*Flohr*).

One example. Broader and less parallel than *A. seticornis* and *A. undatus*. The

thorax is truncate at the base, with the sides only feebly sinuate behind; the antennæ are very slender, with the tenth joint greatly widened; the elytral punctuation is coarse, and the elevations consist of oblique, partly coalescent, lines and points and a short carina at the base, each surmounted by very coarse, short, suberect hairs. The punctuation of the upper surface is completely hidden by the earthy coating.

6. **Astrotus nosodermoides.** (Tab. XXII. fig. 22.)

Narrow, subparallel, black, thickly covered with a brownish agglutinated earthy coating, the prothorax with coarse decumbent scaly hairs, the elytra (apparently) with very short suberect hairs. Head coarsely, muricately punctured; antennæ slender, the intermediate joints ovate, longer than broad, the tenth greatly widened; prothorax broader than long, not wider at the base than at the apex, moderately narrowed in front and behind, slightly sinuate before the base, the latter truncate, the apex rather deeply emarginate, the anterior angles prominent, the hind angles subrectangular, the disc moderately convex, the lateral margins considerably raised, the surface covered with scattered granular elevations; elytra rather elongate, not wider than the prothorax, subparallel, widest beyond the middle, obliquely narrowed at the base, and flattened on the disc, with an interrupted, serrate, marginal carina extending from the obtuse humeri nearly to the apex, a stout, straight, median carina extending to the middle, and beyond this several raised points and curved, transverse, irregular elevations, the interspaces and the epipleuræ exceedingly coarsely, sparsely punctate; the entire under surface coarsely, densely punctured; prosternum declivous behind; middle coxal cavities almost closed externally; anterior tibiæ with a sharp tooth at the apex.

Length 7, breadth 3 millim.

Hab. Mexico, Real del Monte (*Richardson*).

One specimen. More parallel and more elongate than *A. seticornis*; the thorax truncate at the base, and with the sides only feebly sinuate behind; the elytra with the elevations differently arranged, and the punctuation exceedingly coarse and sparse. The entire upper surface is covered with an earthy incrustation, so that the pubescence and sculpture is in great part hidden.

SICHARBAS (p. 67).

Sicharbas lobatus (p. 67).

To the locality Mexico, add:—Omilteme in Guerrero (*H. H. Smith*), Huitzilac in Morelos (*Höge*).

Many specimens.

OLOGLYPTUS (p. 68).

Ologlyptus anastomosis (p. 68).

To the locality Mexico, add:—Refugio in Durango, Santa Clara in Chihuahua, Chihuahua city (*Höge*).

Chihuahua specimens agree with Leconte's figure; the others I have seen from Mexico have the elytral costæ more interrupted.

Ologlyptus graciliformis (p. 68).

To the Mexican localities given, add:—Mexico city, Tula and Pachuca in Hidalgo (*Höge*).

2 (A). **Ologlyptus hebes.** (Tab. XXII. fig. 23.)

Very robust, broad, dull black, thickly covered with a brownish, agglutinated, earthy coating, and with short, scattered, coarse scaly hairs. Head coarsely punctate; antennæ short and stout, clothed with very coarse, short hairs, the eighth and ninth joints transverse; prothorax broader than long, not wider at the base than at the apex, the sides rounded at the middle, converging in front and behind, and sinuous before the base, the latter subtruncate, the apex deeply emarginate, the anterior angles prominent but obtuse, the hind angles prominent, rectangular, the disc feebly convex, the lateral margins raised and somewhat expanded, the entire surface very densely, coarsely punctate, each puncture bearing a coarse, decumbent, scaly hair; elytra flattened on the disc, widest a little behind the middle, slightly rounded at the sides, considerably narrowed in front, and produced at the apex, with a stout marginal carina extending from the obtuse humeri nearly to the apex, a similar carina on the middle of the disc, the two almost connected posteriorly, and a short carina midway between them, the rest of the surface (and epipleuræ) with scattered granular elevations, each elevation bearing a short, semi-erect, scaly hair; beneath thickly punctured, each puncture bearing a coarse, decumbent, scaly hair; prosternum depressed in the middle between the coxæ, declivous behind; middle coxæ with a small, but distinct, trochantin; legs exceedingly stout, clothed with very coarse, scaly hairs; anterior tibiæ with a short tooth at the apex.

Length 19–24, breadth 10–11½ millim.

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

Nine examples. This species is perhaps nearest allied to *O. graciliformis*, from which it differs in its large size, robust form, and very stout limbs. The middle coxal cavities are not closed externally and they have a small but distinct trochantin.

Ologlyptus canus (p. 68).

To the locality Mexico, add:—near the city (*Höge*).

Four examples.

Ologlyptus bicarinatus (p. 69).

This species, which is still unique, would be better placed in *Asida*, the trochantin of the middle coxæ being moderately prominent.

Ologlyptus planatus (p. 69).

In the description of this insect I have omitted to mention * that the ninth joint of the antennæ is widened and strongly transverse, and very little narrower than the tenth, the apical three joints forming a sort of club.

* The antennæ are incorrectly drawn by our artist, Tab. II. fig. 16.

BRANCHUS (p. 71).

Branchus obscurus (p. 72).

To the localities given, add:—Mexico, Acapulco (*Flohr*, *Höge*), Dos Arroyos in Guerrero (*H. H. Smith*).

In the single specimen from Guatemala the thorax is broader behind, and without median carina. *B. obscurus* closely resembles various *Asidæ*, from which it may be easily known by the broader apical joint of the antennæ, the exposed ligula, and the much smaller mentum, the latter not covering the base of the maxillæ. The type is contained in Mr. F. Bates's collection.

2. Branchus opatroides. (Tab. XXII. fig. 24.)

Broad oval, convex, dull black, somewhat thickly clothed with short, subclavate, erect, brownish hairs. Head deeply sunk into the prothorax, very coarsely, densely punctate, the lateral lobes of the front impinging upon the eyes and partly dividing them; antennæ short, the apical three joints widened, very strongly transverse; prothorax strongly transverse, much broader at the base than at the apex, convex, widest at the middle, considerably narrowed in front and slightly narrowed behind, the apex rather deeply emarginate, the anterior angles prominent, the hind angles rectangular, the base broadly truncate at the middle and very feebly sinuate on either side, the surface very coarsely, confluently punctate, the disc with a smooth, fine, raised median line and one or two irregular smooth elevations on either side: scutellum not visible; elytra the width of the prothorax at the base, slightly rounded at the sides, convex, rather short, with an irregular marginal carina extending from the somewhat prominent humeri nearly to the apex, a similar carina adjacent to it, and two shorter carinæ on the disc—the one nearest the suture indistinct, and each formed by rows of rounded elevations,—the interspaces with scattered muricate punctures and rounded elevations, the latter becoming coarser towards the sides and there confused with those forming the carinæ; beneath shining, coarsely punctate, the ventral segments (the fifth excepted) smoother in the middle, each puncture with a decumbent coarse hair; prosternum subhorizontally produced, abruptly declivous behind; middle coxal cavities widely open externally, and with large trochantin; legs rather short, roughly punctured and setose; anterior tibiæ with a short tooth at the apex.

Length 7–8, breadth $3\frac{1}{2}$–$4\frac{1}{2}$ millim.

Hab. Mexico, Vera Cruz (*Sallé*, *Höge*), Paso de San Juan in Vera Cruz (*Höge*), Chapala in Jalisco (*Flohr*).

Sent in plenty from Vera Cruz. This species has the chief structural characters of *Branchus*, and I therefore include it in that genus. In facies it resembles an *Opatrum*. *B. floridanus*, Lec., seems to be an allied but very much larger form. In most of the specimens the upper surface is covered with an earthy incrustation. The thorax and elytra are almost truncate at the base.

OXINTHAS (p. 72).

Oxinthas praocioides (p. 72).

Sent in considerable numbers by Herr Höge from the Isthmus of Tehuantepec; also by Mr. Richardson from Santo Domingo, Tehuantepec.

CRYPTOGLOSSA (p. 73).

4. Cryptoglossa granulifera.

Black, slightly shining. Head with a few fine scattered punctures in front, smooth behind; antennæ strongly flattened, the last joint truncate; prothorax slightly narrower at the base than at the apex, broader than long, feebly, transversely convex, narrowed and sinuate at the sides behind, the anterior and hind angles prominent, subacute, the surface with very minute scattered punctures (only visible under a strong lens): elytra oval, the width of the prothorax at the base, seriate-punctate (coarsely in some specimens, finely and muricately in others), the punctures becoming obsolete on the apical declivity, the interstices (the first excepted) each with a series of distantly-placed granular elevations, which become a little coarser towards the sides; beneath opaque, almost impunctate; prosternum very broadly horizontally produced, broadly rounded at the apex, the mesosternum sharply raised on either side and excavate in the middle for its reception; mentum sparsely punctate, depressed in the middle in front.

Length 18–20, breadth 8–10 millim.

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

Five examples. Allied to *C. mexicana* and *C. lævis*, but differing from both of them in having a row of distantly placed granular elevations on each of the elytral interstices (the first excepted); the elytral sculpture is variable, but the granular elevations are always distinct, becoming a little coarser towards the sides.

CENTRIOPTERA (p. 74).

Centrioptera caraboides (p. 74).

To the localities given, add:—Mexico, Matamoros Izucar (*Höge*), Mochitlan in Guerrero (*Baron*), Yautepec in Morelos (*H. H. Smith*).

Sent in plenty from Matamoros Iżucar.

3. Centrioptera spiculosa.

Moderately elongate, broad, black, slightly shining. Head very coarsely, sparsely, irregularly punctate; antennæ slightly flattened, the last joint pointed at the tip; prothorax broader than long, feebly, transversely convex, truncate at the base, rather deeply emarginate in front, about equal in width at the base and apex, the sides broadly rounded anteriorly, strongly sinuate behind, the anterior and hind angles produced and subacute, the surface very minutely, sparsely punctate—the disc smooth in some examples, more distinctly punctate in others,—the punctures coarser and always distinct at the sides; elytra oblong-oval, slightly wider than the prothorax at the base, flattened on the disc, with series of transverse, shallow, muricate punctures, the interspaces (the first excepted) each with a regular series of not very closely placed fine spiculæ, which from the base to the apex become coarser towards the sides, those on the apical declivity not longer than the others, the humeri obtuse but usually distinct; beneath very coarsely punctate, the venter irregularly wrinkled and punctured; mentum very sparsely, coarsely punctate, with an interrupted median groove; prosternum concave, strongly, horizontally produced, the mesosternum slightly excavate for its reception, the latter abruptly declivous in front; legs very coarsely punctate, the tibiæ with fine spiculæ, the hind femora denticulate within.

Length 16–28, breadth $8\frac{1}{2}$–$12\frac{1}{2}$ millim.

Hab. Mexico, Villa Lerdo in Durango (*Höge*), San Felipe Sabinas in Coahuila *Flohr*).

Sent in abundance from Villa Lerdo. Nearest allied to *C. infausta*, Lec., from

Texas, but differing from it in the elytra having regular series of fine spiculæ. The punctuation of the thorax is variable, but the sides are always distinctly punctate.

EUSATTUS (p. 74).

Eusattus brevis (p. 75).

To the Mexican locality given, add :—Zacatecas city, Las Vigas (*Höge*).

The flanks of the prothorax and the elytral epipleuræ are slightly hairy in this species, the latter being gradually widened to the base; the prosternum is not margined at the apex.

5. Eusattus erosus.

Eusattus erosus, Horn, Rev. Ten. of Am. north of Mex. p. 294, t. 15. fig. 21 [1]; Trans. Am. Ent. Soc. x. p. 304 [2].

Hab. North America, Lower California [1].—Mexico, Villa Lerdo in Durango (*Höge*).

6. Eusattus reticulatus.

Zophosis reticulata, Say, Journ. Acad. Phil. iii. p. 250 (1824) [1]; Complete Writings, ii. p. 147 [2].
Discodemus reticulatus, Lec. Class. Col. N. Am. p. 223 (1862) [3].
Eusattus reticulatus, Horn, Rev. Ten. of Am. north of Mex. p. 293 [4]; Trans. Am. Ent. Soc. x. p. 304 [5].

Hab. North America [1], Kansas, Colorado, New Mexico, and Arizona [4].—Mexico, Paso del Norte, Chihuahua city (*Höge*).

Sent in plenty from Paso del Norte.

7. Eusattus venosus.

Oblong-oval, broad, convex, dull black, almost glabrous. Head very sparsely, finely punctate, trisinuate in front, the anterior margin slightly reflexed; prothorax very minutely, sparsely punctate, the punctuation more distinct at the sides; elytra slightly narrowed anteriorly, in some specimens subparallel towards the base, very obtuse behind, each with a marginal carina extending nearly to the apex and two raised lines on the disc, the interspaces finely, transversely reticulate and with shallow rather coarse punctures which are here and there confluent; epipleuræ slightly widened at the base, smooth, glabrous; prosternum very broad, convex, moderately produced, immarginate at the tip; anterior tibiæ greatly produced at their outer apical angle.

Length 11–12½, breadth 7⅓–8⅔ millim.

Hab. Mexico, Zapotlan in Colima, Guadalajara in Jalisco (*Höge*).

Numerous examples from both localities. Closely allied to *E. reticulatus*, but separable from that insect by its more parallel, less inflated shape, different elytral sculpture, and the shorter, broader, and more convex prosternal process. The depressions on the elytra are usually filled with adherent earthy matter.

8. **Eusattus sculptus.**

Broad-oval, convex, black, almost glabrous, the head and prothorax opaque, the elytra slightly shining. Head and prothorax smooth or exceedingly minutely punctate, the prothorax deeply grooved at the sides behind, the lateral margins moderately thickened; elytra each with six rather broad, faint costæ, without marginal carina, the interspaces rather coarsely, confluently punctate, and feebly transversely reticulate; epipleuræ and flanks of the prothorax slightly hairy, the epipleuræ gradually widening to the base and feebly punctured; prosternum strongly, horizontally produced, the apex immarginate; anterior tibiæ strongly produced at their outer apical angle.

Length 9½–13, breadth 5½–8 millim.

Hab. Mexico, Northern Sonora (*Morrison*), Paso del Norte, Villa Lerdo in Durango (*Höge*).

Sent in abundance by Herr Höge from the Mexican frontier. The elytra are sculptured as in *E. reticulatus*, but they are without a marginal carina; in some specimens the basal portion is smooth. The thorax is deeply grooved on either side behind, so that the margins appear to be somewhat expanded posteriorly. The elytral punctuation shows no tendency to become muricate. Dr. Horn, to whom I have forwarded an example, informs me that this species also occurs in Arizona and Colorado, and that it is allied to *E. difficilis*, which has the epipleuræ more hairy and the elytral sculpture muricate.

9. **Eusattus mexicanus.**

Oblong-oval, broad, convex, dull black, almost glabrous. Head finely, sparsely punctate, strongly trisinuate in front, the anterior margin reflexed and grooved within; prothorax minutely, sparsely punctate on the disc, the punctures more distinct towards the sides; elytra with three more or less distinct raised lines on the disc, without marginal carina, the interspaces finely transversely reticulate and rather coarsely punctured, the inflexed portion sparsely punctate; the flanks of the prothorax with a few hairs; the epipleuræ abruptly widened at the base, smooth, almost glabrous; prosternum very broad, rather convex, moderately produced, the apex broadly rounded and immarginate; anterior tibiæ strongly and somewhat obtusely produced at their outer apical angle.

Var. The elytral costæ nearly or quite obsolete.

Length 9½–14, breadth 5½–8½ millim.

Hab. Mexico, Villa Lerdo in Durango, Colima city, Sayula in Jalisco, Chilpancingo (*Höge*).

Sent in considerable numbers from Sayula. This species closely resembles *E. venosus*, but differs from it in having the anterior margin of the head more strongly trisinuate and more distinctly carinate; the elytra are without marginal carina and usually have three raised lines on the disc—these being obsolete in some of the Colima and Villa Lerdo specimens,—the interspaces reticulate and rather coarsely punctate, the punctures here and crowded together in large shallow foveæ; the prosternum is very broad.

10. **Eusattus obliteratus.**

Oblong-oval, black, opaque. Head and prothorax very sparsely, minutely punctate; elytra with exceedingly shallow, rather coarse, widely scattered punctures, and here and there faintly, transversely wrinkled, and usually with indications of broad obsolete costæ, each puncture bearing a very minute scale-like hair,

without marginal carina; epipleuræ abruptly widened at the base, faintly punctured, hairy; prosternum strongly produced, margined at the apex.
Length 7½–9, breadth 4½–5½ millim.

Hab. MEXICO, Villa Lerdo in Durango (*Höge*).

Many specimens. This insect nearly agrees with the description of *E. puberulus*, Lec., from Texas, but Dr. Horn, to whom I have submitted an example, informs me that it is distinct. *E. obsoletus* is the smallest of the Mexican species; it is more parallel and much narrower than *E. brevis*, and has the prosternum margined at the apex. The scale-like hairs on the elytra are only visible under a strong lens and are easily abraded.

ELÆODES (p. 76).

Elæodes eschscholtzi (p. 77).

Elæodes eschscholtzi (Sol.), huj. op. p. 77, Tab. III. fig. 24 (♂) (Dec. 1884).
Eleodes wickhami, Horn, Trans. Am. Ent. Soc. xviii. p. 41, t. 1. fig. 12 (♂) (Feb. 1891)[1].

To the localities given, add:—NORTH AMERICA, Arizona[1].

2 (A). Elæodes macrura.

♂. Very elongate, convex, subfusiform, black, moderately shining. Head sparsely, minutely punctate, the punctures much coarser on the anterior part; prothorax convex, broader than long, a little narrowed in front and behind, slightly broader at the base than at the apex, very feebly carinate at the sides (the carina scarcely visible from above), the anterior angles sharply produced and slightly everted, the surface exceedingly minutely, sparsely punctate; elytra strongly caudate, including the caudal prolongation more than four times as long as the prothorax, gradually widening to about the middle and then obliquely converging behind, with rows of very fine approximate punctures, the interstices feebly convex on the disc, perfectly flat at the sides, and each with a row of distantly placed, submuricate impressions, which are coarser than those of the striæ; anterior femora armed with a sharp, slightly curved, strong tooth on the inner side, and emarginate between this and the apex; anterior tibiæ emarginate on the inner side at the base; posterior tibiæ feebly sinuous.
Length (including cauda) 34, breadth 12 millim.

Hab. MEXICO, Villa Lerdo in Durango (*Höge*).

One example. More elongate and more fusiform than the same sex of *E. ventricosa*; the prothorax more convex, and with a very feeble lateral carina; the elytra with a series of distantly placed submuricate punctures upon each interstice, these punctures coarser than those of the striæ.

Elæodes spinipes (p. 77).

To the Mexican localities given, add:—Zimapan, Tula, and Ixmiquilpan in Hidalgo (*Höge*).

Var.? Less ventricose; the elytra flatter, with rows of more distantly placed punctures, the interstices flat, each with a row of finer, more scattered impressions.

Hab. MEXICO, Chihuahua city, Durango city, Aguas Calientes city, Lagos (*Höge*), Guanajuato (*Flohr*, *Sallé*).

The typical form has been received in plenty from the States of Hidalgo and San Luis Potosi. The variety (?) is not uncommon at Guanajuato; but as these specimens differ a good deal *inter se*, it is inadvisable to treat them as distinct.

Elæodes ventricosa (p. 78).

To the locality Mexico, add :—Monterey in Nuevo Leon (*Höge*), Tampico in Tamaulipas (*Richardson*).

Var. The prothorax a little more elongate and with the anterior angles more prominent.

Hab. Mexico, Villa Lerdo in Durango, Durango city, Saltillo in Coahuila (*Höge*).

We have received numerous examples of both forms. In the single male from Coahuila the caudal process of the elytra is considerably reduced in length. *E. ventricosa* should be placed in the same section as *E. rugosa* and *E. eschscholtzi*, the elytra being caudate in the male.

Elæodes hispilabris (p. 79).

To the Mexican locality given, add :—Nuevo Laredo in Tamaulipas (*Höge*).

Sent in great numbers by Herr Hoge from Nuevo Laredo.

Elæodes gracilis (p. 79).

To the Mexican locality given, add :—Paso del Norte and Santa Clara in Chihuahua, Chihuahua city, Saltillo in Coahuila (*Höge*).

The four specimens received from Saltillo have the elytral interstices convex.

Elæodes obscura (p. 79).

To the Mexican locality given, add :—Santa Clara in Chihuahua (*Höge*).

9 (A). **Elæodes tricostata.**

Blaps tricostata, Say, Journ. Acad. Phil. iii. p. 262 (1824) [1]; Complete Writings, ii. p. 154 [2].
Pimelia tricostata, Kirby, Fauna Bor.-Am. iv. p. 232, t. 5. fig. 9 [3].
Eleodes tricostata, Horn, Rev. Ten. of Am. north of Mexico, p. 307 [4].
Eleodes (?) *planata,* Solier, Studi Ent. p. 366 [5].
Eleodes robusta, Lec. Proc. Acad. Phil. x. p. 183 [6].

Hab. North America, plains of Kansas and Nebraska and southward into Texas [4].—Mexico, Nuevo Laredo in Tamaulipas (*Höge*).

Found in abundance at Nuevo Laredo, just within our northern boundary.

11. Elæodes vicina.

Elæodes quadricollis, huj. op. p. 80 (nec Eschsch., Mann.).
Eleodes vicina (Lec.), Casey, Ann. N. Y. Acad. v. p. 395 (Nov. 1890).
? *Elæodes sonoræ*, huj. op. p. 85, Tab. IV. fig. 13.

According to Capt. Casey, *E. quadricollis*, Mann., and *E. vicina*, Lec., are distinct species, the former occurring in the vicinity of San Francisco and the latter inhabiting the Gila valley.

Elæodes alutacea (p. 80).

To the Mexican localities given, add:—Villa Lerdo in Durango, Cholula, Matamoros Izucar, Atlixco, Amecameca, Salazar, Mexico city (*Höge*).

The typical form of this very variable species has been received in plenty from Toluca; the coarsely punctured form (?) (*E. maillei*) in numbers from various places in the State of Puebla.

13 (A). Elæodes polita.

Black, shining, elongate-oval, narrow (♂), broad-oval and comparatively short (♀). Head somewhat closely, moderately finely punctate; prothorax transversely subquadrate, widest at one-third from the apex, the sides strongly rounded anteriorly and obliquely converging behind, the base and apex equal in width, the anterior angles obtuse, the hind angles subrectangular (obtuse in some specimens), the lateral carina sharp, the surface very finely, sparsely punctate; elytra oblong-oval (♂), broad-oval and flattened on the disc (♀), with rows of rather coarse, not very closely placed punctures, the interstices strongly convex, each with an irregular row of fine, widely separated punctures; beneath shining, with a few scattered fine punctures; prosternum declivous behind, sulcate in front; anterior femora stout, feebly emarginate on the inner side before the apex; anterior tarsi clothed with spiny hairs beneath; anterior and intermediate tibiæ slightly curved in the male, the upper spur of the anterior pair much longer and stouter than the lower one in the female; first ventral segment depressed in the middle behind in the male.
Length 11–13, breadth $4\frac{2}{3}$–$6\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Salazar, Huitzilac (*Höge*).

Sent in abundance by Höge. This is probably an extreme varietal form of *E. alutacea*, from which it differs in the strongly convex elytral interstices. The punctures of the elytral series are rather coarse and deep, not very closely placed. The female is comparatively short, very much wider than the male.

13 (B). Elæodes segregata.

Dull black, elongate-oval, narrow (♂), broad-oval (♀). Head sparsely, finely punctate; prothorax broader than long, feebly transversely convex, subquadrate, rounded at the sides anteriorly and slightly sinuous before the base, the base and apex about equal in width, the anterior angles obtuse, the hind angles subrectangular, the surface exceedingly minutely, sparsely punctate; elytra flattened on the disc anteriorly, oblong-oval in the male, very much broader in the female, slightly emarginate at the base, and with the apex rather broadly produced, the humeri somewhat prominent but obtuse, the surface with rows of fine, shallow, distantly placed punctures, the interstices each with a single row of very minute punctures; beneath shining, the ventral surface longitudinally wrinkled and with widely scattered fine punctures; prosternum slightly produced, abruptly declivous behind, sulcate in front; anterior tarsi clothed with

short spiny hairs beneath; anterior femora stout, feebly emarginate on the inner side before the apex anterior and intermediate tibiæ slightly curved in the male, the upper spur of the anterior pair longer and stouter than the lower one in the female; first ventral segment depressed in the middle behind in the male.

Length 12–15, breadth 5–8 millim. (♂ ♀.)

Hab. Mexico, Omilteme and Xucumanatlan in Guerrero (*H. H. Smith*), Mochitlan in Guerrero (*Baron*).

Twelve examples. Closely allied to *E. alutacea*, Sol., but differing from all the varieties of that species in the sculpture of the elytra and in the opaque upper surface. The male is less elongate and has more slender legs than the same sex of *E. amaura*. Apparently confined to Western Mexico.

15 (A). **Elæodes amaura.**

Elæodes maura, huj. op. p. 81, Tab. IV. figg. 4, 5 (nec Say).

To the Mexican localities given, add:—Matamoros Izucar, Zimapan (*Höge*).

The above name is proposed for the species doubtfully referred to *E. maura*, Say. *E. elongatula*, Sol., quoted as a synonym, may or may not be the species described by Eschscholtz under the same name. All these descriptions are too imperfect for identification. Mr. H. H. Smith has sent us a female specimen of this species from Orizaba with a *Gordius* emerging from the anus; about three inches of the worm are extruded.

Elæodes rotundicollis (p. 82).

To the Mexican localities given, add:—San Andres Chalchicomula, Cordova (*Höge*).

Apparently common in the State of Vera Cruz.

Elæodes carbonaria (p. 83).

To the Mexican locality given, add:—Chihuahua (*M. Kerr*), Paso del Norte, Santa Clara in Chihuahua, Chihuahua city, Nuevo Laredo in Tamaulipas, Saltillo in Coahuila, Monterey in Nuevo Leon, Villa Lerdo in Durango, Lagos, Zacatecas (*Höge*).

Abundant in Northern Mexico. An extremely variable and puzzling species; some examples are fusiform, others comparatively short and small; in a few specimens the elytral interstices are convex.

Elæodes sulcatula (p. 83).

To the locality Mexico, add:—Rio Frio Ixtaccihuatl (*Flohr*).

One female example. This species should be placed near *E. sulcata*. The anterior tarsi are mutilated in the type, and they are incorrectly described as being clothed with spiny hairs beneath.

Elæodes dilaticollis (p. 83).

Var. Smaller, the prothorax in some specimens less rounded at the sides; the elytra with minute scattered punctures, which sometimes show a tendency to form striæ. The female much broader and less elongate than the male.

Length 12½–14 millim.

Hab. MEXICO, Real del Monte (*Höge*, *Richardson*), Toluca (*Höge*), Patzcuaro (*Flohr*).

The type of *E. dilaticollis* is a male (not a female, as stated) and some of the Real del Monte examples of the same sex agree well with it, except as regards their much smaller size. *E. dilaticollis* is closely allied to *E. alutacea* and *E. amaura*.

Elæodes longicollis (p. 84).

To the Mexican localities given, add :—Chihuahua (*M. Kerr*), Santa Clara in Chihuahua, Chihuahua city, Villa Lerdo in Durango, Durango city, Lagos, Aguas Calientes city, Saltillo in Coahuila (*Höge*).

Var. The elytra with the suture broadly rufous.

Hab. Santa Clara in Chihuahua (*Höge*).

The typical form has been sent in plenty by Herr Höge; of the variety we have received four specimens, all females.

Elæodes ponderosa (p. 84).

This species should be placed in the same group with *E. hepburni*, *E. forreri*, &c., the basal joints of the anterior tarsi in the male being densely clothed with fine hairs beneath.

Elæodes ruida (p. 84).

To the Mexican localities given, add :—Amecameca in Morelos, Las Vigas, Cholula (*Höge*).

Elæodes glabricollis (p. 85).

To the Mexican locality given, add :—Aguas Calientes city (*Höge*), Jaral in Guanajuato (*Flohr*).

Mr. Flohr informs me that this species is not uncommon in the States of San Luis Potosi and Guanajuato.

Elæodes angusta (p. 85).

To the Mexican localities given, add :—Villa Lerdo in Durango, Zapotlan, Zimapan, Mexico city, San Andres Chalchicomula, Las Vigas (*Höge*), Jaral (*Flohr*).

Some of the smooth varieties of this species are scarcely separable from *E. longicollis*, Lec.

Elæodes sonoræ (p. 85).

We have received additional specimens of this insect, including both sexes, from Northern Sonora. *E. sonoræ* is probably conspecific with *E. vicina*, Lec.

Elæodes spinolæ (p. 86).

To the Mexican localities given, add:—Amula and Omilteme in Guerrero (*H. H. Smith*), Mochitlan in Guerrero (*Baron*), Zimapan (*Höge*), Mexico city (*Flohr*, *Höge*).

Elæodes longicornis (p. 87).

Amongst some additional specimens of this species received from Ciudad there are several with rows of fine punctures on the elytra.

Elæodes forreri (p. 88).

Sent in great numbers by Herr Höge from Ciudad; in a few specimens the upper surface is almost shining, and the elytral punctuation is very fine and diffuse, without trace of serial arrangement.

38 (A). **Elæodes olida.**

Elongate, convex, glossy black. Head with a few minute scattered punctures, very broadly triangularly flattened in front; prothorax transversely convex, much broader than long, strongly rounded at the sides, and about equally narrowed in front and behind, the lateral carina sharply raised, the apex deeply emarginate, the base truncate or feebly emarginate, the anterior angles almost rounded, the hind angles obtuse but distinct, the surface impunctate; elytra very elongate and widest beyond the middle in the male, shorter and more oval in the female, considerably narrowed in front, and with the apex broadly, obtusely produced, the humeri obtuse, the basal portion of the epipleural carina visible from above, the surface almost smooth; beneath slightly shining, the ventral surface with scattered, shallow, transverse wrinkles and sometimes with a few fine punctures; prosternum abruptly declivous behind; legs very elongate, slender; anterior femora unarmed; anterior tarsi in both sexes clothed with silky hairs beneath; anterior tibial spurs subequal; posterior tibiæ in the male dilated at the apex and sinuous.

Length 18–25, breadth 7–10 millim. (♂ ♀.)

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Thirteen examples. Allied to *E. solieri* and *E. lævigata*, but more elongate, more convex, and very much larger than either of those species. The legs are very elongate, and the posterior tibiæ are dilated at the tip and sinuous in the male.

Elæodes angulata (p. 91).

To the locality Mexico, add:—Tenango del Valle (*Richardson*), Toluca, Mexico city (*Höge*).

An *Elæodes* sent in numbers by Herr Höge from Toluca is perhaps referable to *E. angulata*; and the Oaxaca specimens (♀) referred to *E. gravida* belong here. The males are broader and less oval than the same sex of *E. alutacea*.

Elæodes sulcata (p. 92).

To the locality Mexico, add:—Huitzilac in Morelos (*Höge*).

Two examples.

49 (A). **Elæodes peropaca.**

Moderately elongate, broad, black, very opaque. Head sparsely, rather coarsely punctate; prothorax transversely cordate, flattened on the disc, dilated at the sides, widest at one-third from the apex and strongly narrowed behind, the apex deeply, the base shallowly, emarginate, the anterior and hind angles obtuse, the surface rather closely and somewhat coarsely punctured, the punctures deeper and irregularly confluent at the sides, the disc with indications of a median groove; scutellum almost smooth; elytra elongate-oval, narrowed in front, abruptly declivous and somewhat acuminate behind, moderately convex, sulcate, the interstices convex (almost flat towards the suture in one specimen), the entire surface minutely coriaceous and finely transversely wrinkled, with widely scattered, very minute, smooth, raised points, which are subserially arranged in the sulci, the latter each with a row of obsolete foveæ in one specimen, the humeri obtuse but distinct, the epipleuræ almost smooth, the basal portion of the carina visible from above; beneath irregularly wrinkled, the ventral surface with scattered granular elevations; prosternum declivous behind; the basal joints of the anterior tarsi clothed with fine hairs beneath; anterior femora slightly emarginate on the inner side near the apex.

Length 19–20, breadth 8½ millim.

Hab. Mexico, Villa Lerdo in Durango, Toluca (*Höge*).

Two specimens. This species approaches the section *Discogenia*, Lec.; it is allied to *E. consobrina*, Lec.

49 (B). **Elæodes tessellata.**

Oblong-oval, broad, black, opaque. Head finely, sparsely punctate; prothorax transverse, a little flattened on the disc and dilated at the sides, about equally narrowed in front and behind, the sides strongly rounded at the middle, the apex deeply emarginate, the base truncate, the surface thickly and rather coarsely punctured, the punctures deeper and transversely confluent towards the lateral margin, the disc with an interrupted smooth median line; elytra broad-oval, rather short, moderately convex, very much wider than the prothorax, abruptly declivous behind, and with the apex slightly produced, the humeri very obtuse, the epipleural carina not visible from above, each elytron with six rows of rather elongate, almost smooth, moderately raised elevations, and an almost smooth space along the suture, the interstices transversely reticulate, and sparsely, rather coarsely granulate, the sutural space with a row of very coarse, distantly placed impressions, the inflexed portion coarsely punctured, the epipleuræ abruptly widened at the base; beneath shining, the ventral surface with a few, widely scattered, fine punctures; prosternum declivous behind; anterior tarsi with silky hairs beneath; anterior tibial spurs subequal.

Length 15½, breadth 7¾ millim. (♀?)

Hab. Mexico, San Juan Tumbio (*Flohr*).

Mr. Flohr informs me that he captured three examples of this peculiar species in June 1883—two at San Juan Tumbio (from one of which the above description is taken) and one at Tingambato, Michoacan; they were found beneath rubbish.

Elæodes goryi (p. 93).

To the Mexican localities given, add:—Nuevo Laredo in Tamaulipas (*Höge*).

50 (A). **Elæodes subnitens.**

Eleodes subnitens, Lec. Ann. Lyc. N. York, v. p. 134[1]; Horn, Rev. Ten. of Am. north of Mexico, p. 319[2].

Hab. North America, Gila River [1 2].—Mexico, Northern Sonora (*Morrison*).

Three examples. Belongs to the same section as *E. goryi*, Sol. (=*seriata*, Lec.).

EMBAPHION. (To follow the genus *Elæodes*, p. 93.)

Embaphion, Say, Journ. Acad. Phil. iii. p. 254 (1824); Complete Writings, ii. p. 150; Lacordaire, Gen. Col. v. p. 152; Horn, Rev. Ten. of Am. north of Mexico, p. 320.

1. **Embaphion muricatum.**

Akis (?) *muricata,* Say, Journ. Acad. Phil. iii. p. 253 (1824)[1]; Complete Writings, ii. p. 149[2].
Embaphion muricatum, Horn, Rev. Ten. of Am. north of Mexico, p. 320[3].
Embaphion concavum, Lec. Proc. Acad. Phil. vi. p. 446[4]; Thoms. Arcana Naturæ, t. 13. fig. 10[5].

Hab. North America, Kansas to Texas [3], Texas [4].—Mexico, Nuevo Laredo in Tamaulipas (*Höge*).

Sent in abundance by Herr Hoge, from just within our northern frontier.

ARGOPORIS (p. 93).

1. **Argoporis alutacea.**

Argoporis bicolor (Horn), huj. op. p. 94, Tab. V. fig. 1 (nec Lec.).
Argoporis alutacea, Casey, Ann. N. York Acad. v. pp. 405, 406, t. 4. fig. 11 (♂) (Nov. 1890).

Argoporis rufipes (p. 94).

Argoporis nitida, Casey, Ann. N. York Acad. v. pp. 405, 406, t. 4. fig. 12 (♂) (Nov. 1890)[1].

To the localities given, add:—North America, Texas [1].—Mexico, Paso del Norte, Chihuahua city, Santa Clara in Chihuahua, Villa Lerdo in Durango, Durango city (*Höge*).

Sent in plenty by Herr Höge from the above Mexican localities. Varies in colour, in the intensity of the punctuation of the head, and in the depth and size of the punctures of the elytral series, also in having the elytral interstices slightly convex in some specimens. The head usually has the punctures finer on the anterior part: in the specimens from Paso del Norte (*A. nitida*, Casey) they are denser than in the type of *A. rufipes*, while in some of those from Durango city they are very fine, sparse, and uniform. In one male from Durango city the posterior femoral teeth are almost obsolete; the first ventral segment, as noted by Capt. Casey, is tuberculate in the middle in this sex. *A. nitida* was described from a single male example.

Argoporis atripes (p. 95).

To the Mexican localities given, add:—Villa Lerdo in Durango, Aguas Calientes city, Lagos, Sayula in Jalisco (*Höge*).

Sent in abundance from Aguas Calientes.

Argoporis cavifrons (p. 95).

To the Mexican localities given, add:—Mazatlan (*Höge*).

Argoporis costipennis (p. 96).

Argoporis costipennis (Lec.), Casey, Ann. N. York Acad. v. p. 405, t. 4. fig. 10 (♂) (Nov. 1890).

To the localities given, add:—Mexico, Northern Sonora (*Morrison*).

8. **Argoporis unicalcarata.**

Moderately convex, black or pitchy-black, slightly shining. Head rather short, broad, strongly reflexed at the sides in front, thickly and very irregularly punctured, the punctures on the epistoma fine, the others moderately coarse; antennæ stout, rather short; prothorax as long as broad, convex, rounded at the sides anteriorly and gradually narrowing behind, widest before the middle, the base and apex about equal in width, the angles obtuse, the base broadly, feebly emarginate, the surface very minutely, closely, uniformly punctured; elytra elongate-oval, with rows of moderately coarse, not very closely placed punctures, the interstices very minutely, somewhat closely punctate, flat, the first, third, and seventh very strongly and abruptly carinate near the apex (the first and seventh projecting beyond the apex of the elytra when the insect is viewed from above), the humeri dentiform, very prominent; beneath longitudinally wrinkled and with some scattered punctures; legs pitchy-red; prosternum declivous behind the coxæ, strongly produced, the apex vertical.

♂. Anterior femora sharply carinate on the inner side towards the base; anterior tibiæ curved, denticulate within; posterior femora incrassate beyond the middle and armed with a single long, stout, blunt tooth; first ventral segment with a rounded, flattened tubercle in the middle.

Length 12–13 millim. (♂ ♀.)

Hab. Mexico, Villa Lerdo in Durango, Aguas Calientes city (*Höge*).

Three males and two females. This species resembles *A. costipennis* in its male characters. The elytra, viewed from above, appear to be quadri-tuberculate at the apex.

9. **Argoporis tridentata.**

Moderately convex, black or pitchy-castaneous, slightly shining. Head coarsely punctured between and behind the eyes, the anterior portion very minutely punctate, the sides strongly reflexed; antennæ stout, rather short; prothorax convex, as long as broad, widest at one-third from the apex, the sides rounded anteriorly, gradually converging and slightly sinuate behind, the base feebly emarginate and sometimes narrower than the apex, the anterior angles obtuse, the hind angles distinct, the surface exceedingly minutely, somewhat thickly, uniformly punctate; elytra elongate-oval, with rows of coarse, deep, rather distantly-placed punctures, the interstices sparsely, exceedingly minutely punctate, flat or very feebly convex, the first, third, and seventh feebly costate at the apex, the humeri dentiform, very prominent; beneath longitudinally wrinkled; legs black or pitchy-red; prosternum declivous behind, produced, the apex vertical.

♂. Anterior femora with a short subangular carina on the inner side near the base; anterior tibiæ curved, denticulate within; intermediate femora obsoletely denticulate in the middle; posterior femora incrassate

beyond the middle and armed with three long, rather slender, equidistant teeth; first ventral segment transversely tuberculate in the middle and rather deeply depressed in the centre at the apex, the second segment broadly depressed along the middle.

Length 11½–13½ millim. (♂ ♀.)

Hab. Mexico, Zapotlan in Colima, Chilpancingo in Guerrero (*Höge*).

A male from Zapotlan and five females from Chilpancingo. This species is allied to *A. rufipes*, but differs from it in the head being coarsely punctured between the eyes, the elytra more narrowed anteriorly, and the legs darker, the hind femora of the male with three long, subequal teeth. The punctuation of the thorax and of the elytral interstices is only visible under a strong lens.

10. **Argoporis lævicollis.**

Feebly convex, flattened above, varying in colour from pitchy-black to rufo-castaneous, slightly shining. Head minutely or very finely punctured, the punctures near the eyes distinctly coarser, the sides strongly reflexed; antennæ stout, short; prothorax as long as broad, feebly convex, widest a little before the middle, slightly narrowed behind, the angles obtuse, the base feebly emarginate, the surface smooth or almost imperceptibly punctate; elytra elongato-oval, flattened on the disc, with rows of moderately coarse, not very closely placed, shallow punctures, the interstices flat throughout and almost smooth, the humeri dentiform; beneath longitudinally wrinkled and with minute scattered punctures; legs pitchy-red; prosternum declivous behind, produced, the apex vertical.

♂. Anterior femora feebly carinate on the inner side near the base; anterior tibiæ curved, denticulate within; intermediate femora finely denticulate on their inner edge; posterior femora moderately incrassate beyond the middle and armed with four or five very short, blunt teeth, the inner one slightly stouter than the others; first ventral segment with a rounded, flattened tubercle in the middle and depressed in the centre at the apex, the second segment broadly depressed along the middle.

Length 10–14 millim. (♂ ♀.)

Hab. Mexico, Ventanas in Durango (*Höge*).

Many specimens of both sexes. This species comes nearest *A. cavifrons*, but may be known from it (and from *A. atripes* &c. also) by having the elytral interstices flat at the apex and the head very differently sculptured. It is less convex than *A. cavifrons*, and the elytra are less abruptly narrowed at the base. From *A. atripes* it also differs in its less parallel shape (the elytra being more oval), more finely punctured head, smoother thorax and elytral interstices, paler legs, and more produced prosternum.

MITYS (p. 97).

This genus, as already stated (*anteà*, p. 261), belongs to the "Misolampides."

2. **Mitys politus.**

Sphærotus politus, de Brême, Rev. Zool. 1842, p. 109[1].

Mitys lævis, huj. op. p. 98.

Originally described[1] from a specimen from Mexico in Chevrolat's collection.

CENTRONOPUS (p. 99).

3. **Centronopus bimaculatus.** (Tab. XXIII. fig. 1, ♂.)

Elongate, parallel, black with an æneous lustre, very shining; the elytra each with a large, transverse, reddish-yellow patch a little below the base, extending to the lateral margin but not to the suture. Head closely, rather coarsely punctured, truncate in front, and slightly depressed between the eyes (♀), rugulosely punctured, broadly and very deeply excavate between the eyes, and with the anterior margin reflexed and subangularly produced in the middle (♂); antennæ extending to a little beyond the base of the prothorax, slender, thickening outwardly, the penultimate joints about as broad as long, the basal joints more or less rufous, the others infuscate or black; prothorax strongly transverse, convex, sharply margined, the sides rounded anteriorly and slightly converging behind, the base bisinuate and deeply grooved within, the hind angles acute and prolonged a little backwards, the apex deeply emarginate, the anterior angles obtuse, the disc transversely depressed in the middle behind and canaliculate in the centre at the apex, the entire surface very minutely, sparsely, shallowly punctate; elytra about three times as long as, and distinctly wider than, the prothorax, parallel to beyond the middle, coarsely and deeply punctate-striate, the interstices feebly convex and exceedingly minutely punctate; beneath pitchy-brown, shining, minutely punctured; legs black, the tarsi paler; prosternum declivous behind; intercoxal process of the abdomen triangular.

♂. Anterior tibiæ with a sharp triangular tooth on the inner side at the middle, and the intermediate and hind tibiæ each with a similar, but narrower, tooth towards the apex; all the femora clothed with rather long, scattered, fine yellow hairs on their inner edge; anterior tibiæ with a dense brush of golden hairs on the inner side at the tip.

Length $11\frac{1}{2}$–13, breadth $4\frac{1}{2}$–$4\frac{3}{4}$ millim. (♂ ♀.)

Hab. Mexico, Paso de San Juan in Vera Cruz (*Höge*), Actopan (*fide Flohr*), Temax in North Yucatan (*Gaumer*).

Seven examples, all but one from Yucatan. The male of this species has all the tibiæ triangularly toothed within (instead of the anterior pair only, as in the other members of the genus), and the head very broadly and deeply excavate between the eyes. In the form of the head &c. it agrees with *Centronopus*.

PYRES (p. 100).

1. **Pyres speciosus.**

Centronopus speciosus, Pasc. Ann. & Mag. Nat. Hist. 5th ser. xi. p. 439 (1883).
Pyres metallicus, huj. op. p. 101, Tab. V. fig. 10 (July 1885).

RHINANDRUS (p. 101).

Rhinandrus helopioides (p. 102).

To the Mexican locality given, add:—Tehuantepec (*Höge*).

ZOPHOBAS (p. 103).

Zophobas klingelhöfferi (p. 103).

Var. *Zophobas signatus*, huj. op. p. 104, Tab. V. fig. 13.

To the localities given, add:—Guatemala, Coban (*Conradt*); Panama, Chiriqui (*Trötsch*).

Two additional specimens (♀) of the variety *signatus* have been received; the latter

differs from *Z. klingelhöfferi* in having the red spots on the elytra larger and the thorax also largely marked with red. The thorax, in the females, varies a little in shape and in the extent of the crenulation of the lateral margin.

4 (A). **Zophobas maculicollis.**

Zophobas maculicollis, Karsch, Berl. ent. Zeitschr. 1866, p. 196 [1]; Kraatz, ibid, 1880, p. 122 [2].

Hab. PANAMA, Chiriqui (*Trötsch*).—COLOMBIA, Bogota [1 2].

We have received a male example of this fine species from Chiriqui.

Zophobas morio (p. 104).

To the localities given, add:—Temax in North Yucatan (*Gaumer*), Teapa in Tabasco (*H. H. Smith*), Tehuantepec (*Richardson*).

Sent in great numbers by Mr. Gaumer from Yucatan. These specimens vary in the depth of the emargination of the epistoma in the male—the emargination in some examples obsoletely toothed within, in others not,—and in the size and proximity of the punctures of the elytral striæ; the surface is usually opaque, in some specimens slightly shining. In a single male from Tampico, Mexico (*Richardson*), perhaps specifically distinct, the epistoma is deeply emarginate and feebly triangularly toothed within, and the striæ of the elytra are only distinct at the apex. *Z. rugipes*, Kr., and *Z. opacus* (Sahlb.) are probably nothing but varieties of *Z. morio*.

Zophobas laticollis (p. 105).

Zophobas laticollis, Motsch. Bull. Mosc. xlv. 2. pp. 35, 36 (1872) [1].
Zophobas laticollis, huj. op. p. 105, Tab. V. fig. 14 (Kraatz, 1880).

To the localities given, add:—BRITISH HONDURAS, Cayo (*Blancaneaux*).—AMAZONS [1].

ALOBATES. (To follow the genus *Zophobas*, p. 106.)

Alobates, Motschulsky, Bull. Mosc. xlv. 2. p. 25 (1872); C. O. Waterhouse, Ann. & Mag. Nat. Hist. 4th ser. xvii. p. 288.

1. **Alobates pennsylvanicus.**

Tenebrio pensylvanicus, Deg. Mém. v. p. 52, t. 13. fig. 10 (1775) [1]; Knoch, Neue Beitr. i. p. 167 [2].
Nyctobates pensylvanica, Horn, Rev. Ten. of Am. north of Mexico, p. 333 [3].
Alobates pensylvanica, Motsch. Bull. Mosc. xlv. 2. p. 25 [4].
Upis chrysops, Herbst, Käfer, vii. p. 236, t. 110. fig. 4 [5].
Tenebrio sublævis, Beauv. Ins. Afr. et Am. p. 163, t. 31. fig. 4 [6].
Nyctobates inermis, Mann. Bull. Mosc. xliii. 2. p. 284 [7].

Hab. NORTH AMERICA [1–7], Northern and Middle States westward to California [3].—MEXICO, Nuevo Laredo in Tamaulipas (*Höge*).

This abundant North-American insect extends southwards to just within our limits.

TAUROCERAS (p. 106).

Tauroceras angulatum (p. 106).

To the localities given, add:—MEXICO, Tapachula in Chiapas (*Höge*).

NUPTIS (p. 107).

Nuptis inquinatus (p. 109).

To the localities given, add:—MEXICO, Tapachula in Chiapas (*Höge*).

Nuptis caliginosus (p. 109).

To the Mexican localities given, add:—Temax in North Yucatan (*Gaumer*).

Sent in plenty by Mr. Gaumer.

8. **Nuptis laticollis.**

Black, shining. Head exceedingly minutely, sparsely punctate, the eyes (♂) very large, rather narrowly separated; prothorax one-half broader than long, very sharply margined at the sides and in front, the sides broadly rounded anteriorly, flexuous and feebly converging behind, the base strongly bisinuate and deeply grooved within on either side of the middle, the hind angles acute, the surface with exceedingly minute scattered punctures, the apex raised in the middle; elytra elongate, parallel, much wider than the prothorax, with rows of distantly placed, oblong, coarse punctures, which become much finer towards the apex and a little finer towards the suture, without trace of striæ, the interstices flat, almost imperceptibly punctate; beneath smooth, shining, the ventral surface very finely, longitudinally wrinkled; prosternum excavate in front, acutely produced behind; mesosternum horizontal, V-shaped, vertical in front, and deeply excavate for the reception of the prosternum.

♂. Anterior femora and anterior tibiæ each armed with a sharp tooth on the inner side beyond the middle.

Length 21, breadth 8 millim. (♂.)

Hab. PANAMA, Chiriqui (*Trötsch*).

One male example. Larger and broader than *N. corticalis*, the thorax very much more transverse and acutely margined, the head almost smooth, the eyes very large, the pro- and mesosternum differently shaped, the anterior femora toothed in the male. The epistoma is simple in the male, as in *N. validus*, *N. tenebrosus*, and *N. corticalis*.

ŒATUS (p. 111).

Œatus chevrolati (p. 111).

Two species were confused by me under this name, and some of the localities quoted refer to the following.

2. **Œatus similis.**

Closely resembling *Œ. chevrolati*, but with the striæ of the elytra finely and closely crenate-punctate throughout.

♂. The femora shallowly grooved along their lower edge towards the base, the groove filled with fine fulvous hairs; the tibiæ from the middle to the apex densely clothed with fulvous hairs within, the anterior pair bowed inwards.

♀. The femora not grooved or hairy on their lower edge towards the base; the tibiæ in their apical third sparsely clothed with fulvous hair within, the anterior pair more slender and less curved.

Length 19-23 millim. (♂ ♀.)

Hab. MEXICO, Yolotepec (*Flohr*), Tapachula in Chiapas (*Höge*); BRITISH HONDURAS, Belize (*coll. F. Bates*); GUATEMALA, El Tumbador, Cerro Zunil, Pantaleon (*Champion*), Escuintla (*Conradt*); COSTA RICA (*Van Patten*).

This insect, of which numerous additional specimens have been received, differs constantly from *Œ. chevrolati* in the fine, uniform punctuation of the elytral striæ: in *Œ. chevrolati* the punctures become very coarse, deep, and partly confluent towards the sides. The sexual characters are similar in both species. In Guatemala *Œ. similis* appears to be confined to the Pacific, *Œ. chevrolati* to the Atlantic slope.

HICETAON (p. 111).

Hicetaon frontalis (p. 112).

To the localities given, add:—MEXICO, Temax in North Yucatan (*Gaumer*).

Sent in numbers by Mr. Gaumer. The male characters resemble those of *Œatus*.

GLYPTOTUS (p. 113).

2. Glyptotus yucatanus.

Black or pitchy-brown, shining. Head sparsely, minutely punctate, the eyes prominent; prothorax transversely convex, much broader than long, very little wider at the base than at the apex, the sides rounded anteriorly, slightly converging and feebly sinuate behind, the base bisinuate and deeply grooved within, the anterior angles strongly deflexed and obtuse, the hind angles acute, the surface very minutely, shallowly, sparsely punctate, the disc sometimes with traces of an impressed median line; elytra with regular rows of not very closely placed, coarse, deep punctures, which become finer towards the apex, the interstices smooth, flat; beneath almost smooth, the ventral surface finely, longitudinally wrinkled; prosternum abruptly declivous behind; legs sparsely punctured, shining.

Length 11-13½, breadth 4½-5½ millim.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

Numerous examples. This species has the thorax more rounded at the sides than in the closely allied *G. nitidus* and *G. cribratus*, distinctly narrowed behind, and almost smooth; the elytra are punctured almost as coarsely as in *G. cribratus*, without trace of striæ.

ISICERDES (p. 113).

1 (A). Isicerdes vicinus.

Black or pitchy-brown, shining. Head finely and closely punctured, the punctures coarser between the eyes; antennæ with the basal joints more or less rufous; prothorax transversely convex, much broader than long, sharply margined, the sides rounded anteriorly and sinuate behind, the anterior angles prominent but obtuse, the base strongly bisinuate, the hind angles sharp, the surface finely, rather sparsely punctate; elytra with regular rows of coarse punctures placed upon almost obsolete striæ, the punctures becoming

coarser and less approximate towards the sides, and finer towards the apex, the interstices flat or very feebly convex, almost smooth; beneath shining, almost smooth; prosternum produced behind, received by the excavate V-shaped mesosternum; tibiæ feebly channelled on their outer edge.

Length 6½-8, breadth 3-3½ millim.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

Many specimens. Closely allied to *I. occultus*, but differing from it in the punctures of the elytral series being much finer towards the apex; in *I. occultus* they are very coarse and deep at the apex, as well as at the sides. The single specimens from Tuxtla, Belize, and Yzabal, quoted under *I. occultus* (*anteà*, p. 114), are best placed here; the one from Tuxtla has the thorax more closely and distinctly punctured than the others, and all of them have the punctures towards the suture of the elytra finer than in those from Yucatan.

HESIODUS (p. 115).

Hesiodus sordidus (p. 116).

The Brazilian specimen included by me under this species differs from the Mexican type in having the punctures of the elytral striæ much coarser and less approximate towards the sides, and the thorax more coarsely and sparsely punctate; I propose to separate it under the name *Hesiodus egaensis*.

Hesiodus jansoni (p. 116).

To the locality given, add:—MEXICO, Temax in North Yucatan (*Gaumer*).

One specimen.

6. Hesiodus ellipticus.

Oblong-ovate, convex, black with a brassy lustre. Head closely, finely punctate, the eyes transverse; antennæ with the basal joints rufous; prothorax strongly transverse, trapezoidal, narrowing from the base, the sides a little rounded in front and feebly sinuate behind, the anterior angles obtuse, the base strongly bisinuate and not grooved within, the hind angles rather sharp, the surface very finely, sparsely punctate; elytra strongly convex, comparatively broad, narrowing from about the middle, with rows of moderately fine, rather distant punctures placed upon almost obsolete striæ, the punctures becoming evanescent towards the apex and not coarser towards the sides, the interstices flat, exceedingly minutely punctate; prosternum produced and received by the V-shaped mesosternum; tibiæ rounded on their outer edge; first joint of the hind tarsi a little longer than the following two joints united.

Length 6½, breadth 2¾ millim.

Hab. NICARAGUA, Chontales (*Janson*).

One specimen. This species differs from the other members of the genus in having the thorax trapezoidal, much broader at the base than at the apex, the eyes transverse, and the sides of the mesosternum sharply raised. In the form of the thorax it approaches *Gonospa*.

CHOASPES (p. 118).

This name is preoccupied in Lepidoptera (Moore, 1881) and I propose to change it to *Choastes.*

RHACIUS (p. 120).

Rhacius sulcatulus (p. 121).

Mr. Flohr informs me that he has found specimens of this insect in decaying trunks of "casahuate" (*Ipomœa arborescens*) at Cuernavaca. We have received additional examples of it from Yucatan (*Gaumer*), and from Atlixco, Puebla (*Höge*).

BLAPSTINUS (p. 124).

Blapstinus mexicanus (p. 124).

Sent in plenty by Mr. Gaumer from Temax in Northern Yucatan, and singly by Herr Höge from Villa Lerdo. The male has the anterior tibiæ thickened, and feebly sinuate within, less strongly so than in the same sex of *B. tibialis.*

Blapstinus tibialis (p. 125).

To the localities given, add :—Mexico, Tapachula in Chiapas (*Höge*).

4. **Blapstinus fortis.**

Blapstinus fortis, Lec. Proc. Am. Phil. Soc. xvii. p. 420 (1878) ; Casey, Ann. N. York Acad. v. p. 429.

Blapstinus interstitialis, huj. op. p. 125, Tab. VI. fig. 16.

The specimens referred by me to this species consist of three forms, which may prove to be distinct :—

(1) Prothorax more or less rounded at the sides behind, the hind angles rather obtuse, the punctuation dense and moderately coarse (=*fortis*, Lec.).—Texas, Florida, North, Central, and Eastern Mexico, Guatemala, Cuba.

(2) Prothorax parallel, or even sinuate, at the sides behind, the hind angles sharp, the punctuation coarser and sparser.—Central Mexico to Panama.

(3) Larger and more shining, the upper surface with a faint brassy lustre; the prothorax shaped as in (2), coarsely but more sparsely punctured.—Tapachula (*Höge*): three examples.

We are indebted to Capt. Casey for a typical male of *B. fortis*, Lec., for comparison.

4 (A). **Blapstinus yucatanus.**

Elongate-oval, rather broad, somewhat depressed, pitchy-black, shining, sparsely clothed with long, decumbent, rather coarse hairs. Head coarsely, densely punctate, the punctures between the eyes still coarser and longitudinally confluent; prothorax strongly transverse, moderately convex, widest at one-third from the base, very much wider at the base than at the apex, the sides obliquely and rapidly converging from the middle, rounded and distinctly converging behind, the apex very deeply emarginate, the base strongly sinuate on either side, the anterior angles sharp and prominent, the hind angles obtuse, the surface densely, coarsely punctate, the punctures here and there longitudinally confluent, more distinctly so

towards the sides; elytra elongate, subparallel in their basal half, with rows of very coarse, deep, not very closely placed, foveate punctures, which towards the sides and apex are placed in shallow striæ, the interstices convex towards the sides and at the apex, almost flat on the disc, thickly, somewhat coarsely punctate; beneath shining, very coarsely, rather closely punctate, the flanks of the prothorax coarsely, longitudinally wrinkled.

Length $7\frac{2}{3}$, breadth $3\frac{1}{3}$ millim. (♀.)

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

One example. Allied to *B. fortis*, Lec., but more shining, the thorax more rounded at the sides and more coarsely, confluently punctate (in this respect resembling *B. dilatatus*), the elytra with series of coarse, deep, foveate punctures. The serial punctures of the elytra are coarser and deeper than in any other species of th genus known to me.

Blapstinus errabundus (p. 127).

To the localities given, add:—MEXICO, Tehuantepec (*Höge*), Temax in North Yucatan (*Gaumer*).

Sent in numbers from Yucatan.

9. Blapstinus pimalis.

Blapstinus pimalis, Casey, Contrib. Col. N. Am. ii. p. 185 (Jan. 1885)[1]; Ann. N. York Acad. v. p. 456[2].

Blapstinus umbrosus, huj. op. p. 127 (Oct. 1885).

To the locality given, add:—NORTH AMERICA, Arizona[1 2].

9 (A). Blapstinus pratensis.

Blapstinus pratensis, Lec. Col. of Kansas and Eastern New Mexico, p. 15 (1859)[1]; Horn, Rev. Ten. of Am. north of Mex. p. 354[2]; Casey, Ann. N. York Acad. v. p. 434[3].

Hab. NORTH AMERICA, Kansas[1 2 3], Colorado[3], Nebraska[3], New Mexico[2], Texas[2 3], Arizona[2].—MEXICO, Nuevo Laredo in Tamaulipas (*Höge*).

A single (♂) specimen from Nuevo Laredo seems to belong to this species.

Blapstinus palmeri (p. 128).

To the Mexican localities given, add:—Chihuahua city (*Höge*).

Blapstinus substriatus (p. 128).

Blapstinus substriatus, huj. op. p. 128; Casey, Ann. N. York Acad. v. p. 144.

Two forms (?) occur of this species:—

(1) The elytral striæ very lightly impressed throughout, finely punctured.—Mexico city, Real del Monte, Guanajuato, Puebla, Toluca, Salazar.

(2) Size larger; the elytral striæ more distinctly impressed, especially towards the sides and apex, and more coarsely punctured.—Southern United States, Chihuahua, Durango, Coahuila.

The specimens from the northern part of our region agree with one from New Mexico forwarded by Capt. Casey; they are perhaps specifically distinct. Two males from Salazar, sent with a normal female of the typical form (1) from the same locality. are only 4 millim. in length; some of the Villa Lerdo specimens of the var. (2) measure 6 millim.

Blapstinus egenus (p. 129).

To the localities given, add:—PANAMA, Colon (*Casey*).

17 (A). **Blapstinus angustatus.**

Elongate, narrow, subparallel, pitchy-brown, shining, very sparsely clothed with long decumbent hairs. Head closely, rather coarsely punctate, the eyes large; prothorax transversely subquadrate, longitudinally convex, scarcely wider at the base than at the apex, the latter very deeply emarginate, the sides feebly converging in front, parallel from before the middle to the base, the anterior angles sharply produced and very prominent, the base bisinuate, the hind angles rectangular, the surface rather coarsely, closely punctate, the punctures sparser on the middle of the disc and separate one from another; elytra elongate, parallel, a little wider than the prothorax, with rows of coarse, deep, approximate punctures placed in shallow striæ, the striæ becoming deeper at the sides and apex, the interstices comparatively coarsely punctate, flat on the disc, convex towards the sides and apex; beneath coarsely punctured; anterior tarsi densely clothed with spongy hairs beneath, and with joints 1–3 rather broadly dilated in the male; wings fully developed.

Length $5\frac{1}{2}$ millim. (♂.)

Hab. MEXICO, Tehuantepec (*Höge*).

One example. Allied to *B. longipennis*, but much narrower than that insect; the thorax very deeply emarginate in front, almost parallel at the sides, moderately transverse, and with very prominent anterior angles; the elytra with series of coarse, deep, approximate punctures placed in shallow striæ, the interstices rather coarsely punctate. More parallel and narrower than any of the other species described here.

Blapstinus atratus (p. 131).

To the localities given, add:—MEXICO, Chilpancingo (*H. H. Smith*), Temax in North Yucatan (*Gaumer*).

Sent in abundance by Mr. Gaumer.

19 (A). **Blapstinus fuscus.**

Blapstinus fuscus, Casey, Ann. N. York Acad. v. p. 427 (Nov. 1890) [1].

Hab. NORTH AMERICA, Texas [1].—MEXICO, Valle del Maiz (*Dr. Palmer*).

A female specimen of a *Blapstinus* obtained by Dr. Palmer at Valle del Maiz agrees very nearly with a male of *B. fuscus* forwarded to me by Capt. Casey. *B. fuscus* resembles *B. atratus*, but has the anterior tarsi much more strongly dilated in the male.

19 (B). **Blapstinus puncticollis.**

Elongate, subparallel, rather depressed, very sparsely pubescent, shining black, the front of the head, oral organs, antennæ, and legs ferruginous. Head coarsely, densely punctate, the eyes large; prothorax strongly transverse, moderately convex, the sides parallel behind, gradually converging in front, the base bisinuate, the hind angles rectangular, the apex feebly emarginate (subtruncate if viewed from above), the anterior angles sharp but not prominent, the surface very coarsely, closely punctate, the punctures a little more scattered on the middle of the disc; elytra the width of the prothorax at the base, parallel in their basal half, moderately elongate, flattened on the disc, with rows of coarsish, approximate punctures placed in very shallow striæ, the interstices flat, feebly convex towards the sides and apex, each with one or two irregular rows of fine punctures; beneath black, the flanks of the prothorax and the epipleuræ obscure ferruginous; wings well developed.

Length 5¼ millim. (♀.)

Hab. MEXICO, Amula in Guerrero (*H. H. Smith*).

This small species, of which we have received only a single abraded example, is allied to *B. atratus*, but it is larger and more shining; the antennæ and legs are ferruginous, the head and thorax are much more coarsely punctured, and the eyes are considerably larger. The punctuation of the thorax is unusually coarse, the punctures separate one from another.

19 (C). **Blapstinus exiguus.**

Elongate-oval, black or pitchy-black, slightly shining, sparsely pubescent. Head densely, rather coarsely punctate, the eyes small; prothorax strongly transverse, moderately convex, very little wider at the base than at the apex, the sides rounded at the middle and obliquely converging in front and behind, the base bisinuate, the hind angles rectangular, the apex feebly emarginate, the anterior angles rather obtuse, the surface punctured like that of the head, the punctures here and there showing a tendency to become coalescent; elytra a little wider than the prothorax at the base, moderately elongate, slightly rounded at the sides in the female, more parallel in the male, with rows of rather fine, approximate punctures placed in shallow striæ, the interstices flat on the disc, feebly convex towards the sides and apex, and each with one or two irregular rows of fine punctures; legs piceous; anterior tarsi scarcely dilated in the male; wings rudimentary.

Length 4–4½ millim. (♂ ♀.)

Hab. MEXICO, Tehuantepec (*Höge*).

Numerous examples. This small species approaches *B. atratus*; it has the thorax narrowed behind, and very little wider at the base than at the apex.

NOTIBIUS (p. 132).

If we follow Capt. Casey's revision of the genera of this group (Ann. N. York Acad. v. p. 499), our two species, *N. rugipes* and *N. affinis*, should be transferred to *Conibius*.

Notibius affinis (p. 132).

To the Mexican locality given, add :—Huitzo in Oaxaca (*Höge*).

Three specimens.

CONIBIUS (p. 133).

Conibius brunnipes (p. 133).

To the localities given, add:—Mexico, Chihuahua city, Villa Lerdo in Durango (*Höge*), Chilpancingo (*H. H. Smith*), Atlixco (*F. D. G.*).

2. Conibius troglodytes.

Moderately elongate, broad, convex, very robust, glabrous, subopaque, black, the sides of the head and of the prothorax, the oral organs, antennæ, and legs obscure rufous. Head exceedingly broad, closely, minutely punctate, the eyes small; prothorax strongly transverse, bisinuate at the base and apex, widest slightly before the middle, the disc longitudinally convex, the sides broadly, horizontally expanded, a little rounded anteriorly, and slightly converging behind, the anterior angles broadly rounded, the hind angles very obtuse, the disc densely, very minutely punctate, the lateral portions more distinctly punctured; elytra rather more than twice as long as, and not wider than, the prothorax, subparallel, narrowing a little anteriorly, finely punctate-striate, the interstices feebly convex and closely, minutely punctate, the humeri rounded; beneath shining, sparsely, finely punctate; prosternum slightly produced, concave at tip; intercoxal process of the abdomen comparatively narrow, rounded at the apex; legs exceedingly stout.

♂. Ventral surface broadly longitudinally depressed in the middle towards the base, the fifth segment also depressed in the centre; the anterior tibiæ merely a little widened.

Length 7, breadth 3¼ millim. (♂.)

Hab. Mexico, Cacahuamilpa in Guerrero (*Flohr*).

This insect, Mr. Flohr informs me, was found under a stone, with ants, at the entrance of the cave of Cacahuamilpa. *C. troglodytes* is allied to *C. gagates* (Horn), from Arizona, from which it differs in the broadly expanded lateral margins of the thorax, and in the finely punctate-striate elytra, the interstices of the latter being slightly convex.

ULUS (p. 133).

3. Ulus comatus.

Elongate-elliptical, convex, piceous or pitchy-brown, shining, thickly clothed with long, coarse, appressed, whitish or yellowish-cinereous hairs, the prothorax coarsely fimbriate at the sides and base, the elytra with very long projecting marginal ciliæ. Head closely, rather coarsely punctate; prothorax strongly transverse, bisinuate at the base and deeply emarginate at the apex, the sides rapidly converging from the base, a little rounded anteriorly, the surface rather sparsely, coarsely punctate, the punctures somewhat closer at the sides; elytra rather deeply punctate-striate, the punctures moderately coarse and approximate, the interstices thickly punctured, almost flat; beneath coarsely punctate; anterior tibiæ broadly produced at their outer apical angle.

♂. Anterior tarsi very feebly dilated; fifth ventral segment slightly depressed in the middle at the apex.

Length 5½–6½ millim. (♂ ♀.)

Hab. Mexico, Vera Cruz (*Flohr*).

Four examples, two of each sex, the females considerably larger than the males. Allied to *U. obliquus* (Lec.), *U. fimbriatus*, Casey, and *U. hirsutus*, Ch., but differing from these species in the much longer pubescence of the upper surface; the thorax is more sparsely and more irregularly punctured than in *U. obliquus* and *U. hirsutus*. Found on the sand-hills on the coast, according to Mr. Flohr.

TRICHOTON (p. 135).

3. **Trichoton sordidum.**

Blapstinus sordidus, Lec. Ann. Lyceum N. York, v. p. 146 [1]; Horn, Rev. Ten. of Am. north of Mexico, p. 352 [2].

Trichoton sordidum, Casey, Ann. N. York Acad. v. p. 410 [3].

Hab. North America, Arizona [1 2 3].—Mexico, Northern Sonora (*Morrison*).

CRYPTICUS (p. 137).

Crypticus ovatus (p. 137).

To the locality given, add :—Mexico, Tehuantepec (*Höge*).

Crypticus mexicanus (p. 137).

To the Mexican locality given, add :—Cordova (*Höge*).

Crypticus maculatus (p. 138).

Mr. Flohr informs me that he captured some specimens of this species at Cuautla, in the Mexican State of Morelos, in the sand of a river-bed, in Nov. 1883.

DAOCHUS (p. 139).

Daochus mandibularis (p. 140).

To the locality given, add :—Guatemala, Coban (*Conradt*).

Two examples.

PENETA (p. 141).

1. **Peneta obtusicornis.**

Peneta obtusicornis, Kirsch, Berl. ent. Zeitschr. 1866, p. 191 [1].

Peneta panamensis, huj. op. p. 142, Tab. VII. figg. 3, 3 *a* (1886).

To the locality given, add :—Colombia, Bogota [1].

PHTHORA.

Phtora, Mulsant, Col. Fr., Latig. p. 228 (1854); Lacordaire, Gen. Col. v. p. 324.

Phthora, Gemminger & Harold, Cat. Col. vii. p. 1959; Leconte & Horn, Class. Col. N. Am. p. 381 (1883).

Diædus, huj. op. p. 144 (nec Lec.).

The mutilated (♀) insect doubtfully referred by me to *Diædus* proves, on the discovery of a second specimen, to belong to *Phthora*, which has a three- (instead of a two-) jointed club to the antennæ, the two genera otherwise being very similar.

1. **Phthora armata.** (Tab. XXIII. figg. 2, ♂ ; 2 *a*, antenna.)

Diœdus punctatus ?, huj. op. p. 144 (nec Lec.).

Moderately elongate, subparallel, very convex, castaneous, shining. Head moderately coarsely, rather thickly punctate, transversely depressed anteriorly, the sides of the front strongly, subangularly raised in the male; prothorax broader than long, transversely convex, subtruncate at the base and rather feebly emarginate at the apex, the sides feebly rounded and converging in front, and slightly converging behind, the lateral carina sharp and a little reflexed, the surface moderately coarsely, closely punctate, the apex depressed in the middle in the male; elytra twice as long as, and slightly wider than, the prothorax, parallel in their basal half, deeply striate, the striæ with moderately coarse, approximate, crenate punctures, which become much finer towards the apex, the interstices strongly convex, and with minute scattered punctures, the humeri angular.

Length $3\frac{1}{2}$–$3\frac{3}{4}$, breadth $1\frac{1}{2}$–$1\frac{3}{5}$ millim. (♂ ♀.)

Hab. Guatemala, Chilasco and Zapote (*Champion*).

Two examples. More convex than *P. crenata* and *P. americana*, the thorax less parallel at the sides behind, and with the lateral carina less prominent and not so strongly reflexed. This insect is exceedingly like *Diœdus punctatus*, except in the form of the antennæ. The sexes differ in the form of the head and thorax.

2. **Phthora elongata.**

Elongate, parallel, moderately convex, pitchy-black, shining; the oral organs and antennæ rufous, the legs pitchy-brown, the tarsi paler. Head thickly and rather coarsely punctured, broadly, transversely depressed in front; prothorax a little broader than long, transversely convex, the sides parallel from the middle to the base, rounded and slightly converging in front, the base subtruncate, the apex rather feebly emarginate, the lateral carina moderately prominent, sharp, and narrowly reflexed, the surface rather coarsely and irregularly punctured, the punctures sparse on the disc, close at the sides; elytra twice as long as the prothorax, and slightly wider than it, parallel to beyond the middle, deeply striate, the striæ with moderately coarse, approximate, crenate punctures, which become finer towards the apex, the interstices strongly convex and with minute scattered punctures, the humeri angular.

Length $4\frac{1}{4}$, breadth $1\frac{2}{3}$ millim.

Hab. Mexico, Las Vigas in Vera Cruz (*Flohr*).

More elongate and less convex than *P. armata*; the thorax longer, with the punctuation sparser and more irregular on the disc. One example.

ZYPŒTES. (To follow the genus *Phthora*.)

Mentum trapezoidal; last joint of the maxillary palpi oblong, subsecuriform, that of the labial pair oblong-ovate; ligula entire; mandibles bifid at the apex; labrum prominent; head very broad, large, deeply sunk into the prothorax, the epistoma truncate and confounded with the front, the sides of the front rounded and converging, not prominent; eyes entire, rather finely granulated, very small, rounded, lateral, scarcely visible from above; genæ with a sinuous, longitudinal, sharply defined juxta-ocular groove for the reception of the basal joints of the antennæ; antennæ short, joints 1–8 closely articulated—1 and 2 stout, 2 stouter than and nearly as long as 3 and 4 united, 3–8 short, gradually increasing in width, and becoming more transverse,—9–11 forming a stout 3-jointed club—9 and 10 very strongly transverse, twice as wide as 8, 11 rounded at the tip, twice as long as 10; prothorax short, very closely fitting to the base of the elytra, and at the sides forming a continuous outline with it, the sides sharply margined; scutellum minute, transversely triangular; elytra about two and a half times as long as the prothorax, regularly

striate from the base nearly to the apex, without scutellar stria: epipleuræ broadly extending to the apex; prosternum strongly carinate, the carina extending forwards to the anterior margin of the prothorax, and widened and produced behind the coxæ, the apex rounded and deeply excavate beneath for the reception of the convexly raised mesosternum: anterior coxæ deeply inserted, transverse, rather distant; intermediate coxæ very widely separated, with small trochantin, the cavities almost closed externally; metasternum moderately long; intercoxal process of the abdomen triangular; legs short, the femora stout and compressed; the tibiæ feebly denticulate on their outer edge at the tip, the anterior pair triangularly dilated, the two hinder pairs flattened, more slender, the spurs short but distinct; tarsi 5-, 5-, 4-jointed, slender, simple, clothed with rather long scattered hairs beneath, the first joint of the hind pair as long as joints 2 and 3 united; body oblong-oval, convex, glabrous, winged.

This genus is proposed for a small species of uncertain affinities. Its glabrous, compact body and general shape resemble that of some of the smaller and narrower forms of Histeridæ. *Zypœtes* seems to be best placed in the vicinity of *Phthora*, in the Ulomides. The deep groove on either side of the head beneath for the reception of the basal joints of the antennæ, the strongly anteriorly carinate prosternum, very small eyes (scarcely visible from above), and broad, complete epipleuræ are its chief characteristics. The prosternal process resembles that of *Ennebœus*, but in that genus the process is not continued forwards in the form of a carina.

1. **Zypœtes epieroides.** (Tab. XXIII. figg. 3; 3 *a*, labium; 3 *b*, maxilla and maxillary palpus; 3 *c*, antenna.)

Oblong-oval, very shining, varying in colour from pitchy-black to pale testaceous, the legs, oral organs, and antennæ testaceous or rufo-testaceous, the femora sometimes paler. Head very finely, sparsely punctate; prothorax strongly transverse, subtruncate at the base, the apex broadly and shallowly emarginate, the anterior angles declivous and slightly produced, the hind angles rectangular, the sides parallel behind, feebly rounded and converging in front, the surface sparsely, very finely punctate; elytra each with six punctured striæ, the first stria continued upwards in a straight line to the base, the punctures fine and approximate, the interstices flat, very sparsely, minutely punctate; beneath with the lateral portions and the epipleuræ finely, sparsely punctate, for the rest smooth.

♂? Head broadly and shallowly depressed in the middle anteriorly.

Length 2–2¾ millim.

Hab. Mexico, Jalapa (*Flohr*, *M. Trujillo*); Guatemala, Zapote (*Champion*); Nicaragua, Chontales (*Janson*).

Seven examples. Varies greatly in colour, after the manner of an *Engis*, and also in size, the two specimens from Guatemala being very much smaller than any of the others. The supposed male is from Chontales.

ECHOCERUS (p. 145).

3. **Echocerus curvicornis.**

Reddish-testaceous, shining. Head short, densely, finely punctate in the female, almost smooth in the male; eyes large, very coarsely faceted, in the female extending laterally far beyond the sides of the front; antennæ rather stout, joints 5–10 very strongly transverse; prothorax much broader than long, the sides parallel behind and a little rounded in front, the apex (viewed from above) truncate, the anterior angles obtuse, the surface closely, finely punctate; elytra finely punctate-striate, the interstices flat, minutely, thickly punctate.

♂. The head excavate between the eyes; the sides of the front thickened and slightly dilated, rounded externally; the mandibles each with a very long, compressed, rather stout horn curving backwards over the head, the horns contiguous at their apex.

Length 3–3½ millim. (♂ ♀.)

Hab. MEXICO, Tehuantepec (*Höge*, ♂), Temax in North Yucatan (*Gaumer*, ♀).

Three examples. Allied to *E. maxillosus*, but differing from it in the much larger and more coarsely faceted eyes in both sexes, the more transverse penultimate joints of the antennæ, the more transverse thorax, the sides of which are more rounded in front, and in the form of the mandibular horns in the male sex. These horns, instead of curving inwards as in the same sex of *E. maxillosus* and *E. analis*, curve backwards over the head and meet at the apex; they are also longer, stouter, and compressed. The head in the male has the sides of the front less dilated than in the same sex of *E. maxillosus*.

ICCIUS (p. 147).

Iccius cylindricus (p. 148).

To the locality given, add:—MEXICO, Cuernavaca (*Höge*).

One male example, a little larger than the Guatemalan type.

ALEGORIA (p. 149).

Alegoria sallæi (p. 149).

To the Mexican locality given, add:—Orizaba (*Flohr*).

Alegoria dilatata (p. 149).

To the localities given, add:—HONDURAS, Ruatan I. (*Gaumer*).

APHANOTUS. (To follow the genus *Alphitobius*, p. 157.)

Aphanotus, Leconte, Class. Col. N. Am. p. 233 (1862); Horn, Rev. Ten. of Am. north of Mexico, p. 368.

Two species of this genus are known—one from California, the other from Arizona; the latter extends into Northern Mexico.

1. Aphanotus parallelus.

Aphanotus parallelus, Casey, Ann. N. York Acad. v. p. 483 (Nov. 1890)[1].

Hab. NORTH AMERICA, Arizona[1].—MEXICO, Zapotlan in Colima (*Höge*).

One specimen.

DOLIEMA (p. 157).

Schedarosus, Reitter, Col. Hefte, xv. p. 42 (1876).

Doliema plana (p. 157).

Schedarosus scidarius, Reitt. Col. Hefte, xv. p. 44.
?*Adelina depressa*, Er. in Wiegm. Archiv, 1847, i. p. 119.

1 (A). Doliema bifurcata.

Reddish-testaceous, shining. Head finely, rather sparsely punctate; antennæ very elongate in the male, shorter in the female; prothorax strongly transverse, considerably narrowed behind, the hind angles acute, the basal foveæ very deep, the surface very finely, sparsely punctate; elytra elongate, parallel, flat, finely and lightly punctate-striate, the interstices sparsely punctate, the lateral carina sharp and extending nearly to the apex, the space between this and the marginal carina vertical.

♂. The sides of the front dilated and thickened, and produced anteriorly into a short, broad lobe, which is emarginate at the apex, the emargination limited internally by an angular projection, and externally by a long, curved, downwardly-directed tooth; the epistoma extremely short, truncate in front, deeply transversely excavate on either side within.

Length 4½–5 millim. (♂ ♀.)

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

Six examples, two of which are males. Larger than *D. plana*; the lateral processes on the head of the male much broader and bifurcate in front, and without an additional tooth beneath. This last-mentioned character will easily separate *D. bifurcata* from the same sex of *D. plana* and *D. pallida*.

2. Doliema pallida.

Pytho pallida, Say, Journ. Acad. Phil. iii. p. 271 (1824)[1]; Complete Writings, ii. p. 160[2].
Sitophagus pallidus, Horn, Rev. Ten. of Am. north of Mexico, p. 346[3].
Schedarosus cucujiformis, Reitter, Col. Hefte, xv. p. 43[4].
Doliema cucujiformis, huj. op. p. 158[5].

To the localities given, add:—NORTH AMERICA[1], Middle and Southern States[3].

Dr. Horn has kindly forwarded male specimens of *D. pallida* and *D. plana* for examination. *D. cucujiformis*, Reitt., is inseparable from *D. pallida*. The male, as in the same sex of *D. plana*, has a small horn beneath the larger one on the head.

2 (A). Doliema quadridentata.

♂. Reddish-testaceous, shining. Head very broadly and deeply excavate anteriorly, densely, minutely punctate, the sides of the front thickened and strongly subangularly produced anteriorly, the epistoma large and angularly produced on either side at the apex; antennæ elongate; prothorax strongly transverse, only a little narrowed behind, the hind angles acute, the basal foveæ very deep, the surface very finely, sparsely punctate: elytra elongate, parallel, flat, finely punctate-striate, the interstices sparsely, minutely punctate, the lateral carina sharp and extending nearly to the apex, the space between this and the marginal carina vertical.

Length 5½ millim.

Hab. MEXICO, Tehuantepec (*Höge*).

One example. Larger than *D. pallida* (=*cucujiformis*), the head much more finely punctured; the thorax less constricted behind, and much more finely and sparsely punctured; the epistoma of the male much larger and angularly produced on either side in front (instead of truncate); the lateral processes in this sex stouter and more prominent, without an additional tooth beneath. Easily distinguishable from our other species by the quadrituberculate anterior margin of the head in the male sex.

SITOPHAGUS (p. 160).

Sitophagus cynæoides (p. 162).

To the locality Mexico, add:—Ciudad in Durango (*Höge*), Mexico city, Las Vigas (*Flohr*).

This species was doubtfully included by me in *Sitophagus*; it would be better placed in *Mophis*, the head being similarly formed in both sexes. *S. cynæoides* closely resembles *M. affinis*, but is more elongate and more parallel; the thorax is more deeply emarginate in front, and the basal foveæ are shallower.

ULOSONIA (p. 163).

Ulosonia bi-impressa (p. 165).

To the localities given, add:—Mexico, Tehuantepec, Tapachula (*Höge*), Temax in North Yucatan (*Gaumer*).

METULOSONIA (p. 166).

Metulosonia reflexa (p. 166).

To the localities given, add:—Mexico, Motzorongo in Vera Cruz (*Flohr*).

MOPHIS (p. 168).

This genus approaches very near *Cynæus*, but may be known from it by the broader epipleuræ, the more prominent eyes (the sides of the front not extending so far outwards), and the differently formed antennæ.

Mophis affinis (p. 169).

Mophis aterrimus, huj. op. p. 169.

To the localities given, add:—Omilteme in Guerrero (*H. H. Smith*), Huitzo in Oaxaca (*Höge*).

The locality Las Vigas should be erased.

DIAPERIS (p. 174).

Diaperis maculata (p. 174).

To the localities given, add :—MEXICO, Misantla (*Flohr*); GUATEMALA, Coban (*Conradt*).

ARRHENOPLITA (p. 175).

2 (A). Arrhenoplita punctatissima.

Elongate, convex, ferruginous, shining. Head large and broad—(♂) densely, rather coarsely punctured between and behind the eyes, smoother in front, armed with two long, erect, stout, widely separated horns, which are placed just within the eyes, the anterior margin reflexed, and triangularly raised on either side in front, the intraocular space flat—(♀) very densely, rugosely punctured, the epistoma a little smoother; antennæ with the seven outer joints widened, 5–10 very strongly transverse; prothorax short, strongly transverse, slightly rounded at the sides, and very little wider at the base than at the apex in the male, gradually narrowing from the base in the female, the surface densely, rather coarsely punctate; elytra moderately elongate, subparallel in their basal half, with rows of coarse punctures placed in almost obsolete striæ, the interstices flat, thickly and coarsely punctate throughout, the humeri obtuse.

Length 4½ millim. (♂ ♀.)

Hab. MEXICO, Acapulco (*Höge*).

One female and two male examples. This species differs from all the allied forms in the coarsely punctured elytral interstices; the thorax is similarly, but more densely, punctate; the cephalic horns of the male are widely separated, long, and erect; the head in the female is unarmed, and more densely, rugosely punctate than in the male.

10 (A). Arrhenoplita occidentalis.

♂. Elongate, ferruginous, slightly shining, very finely pubescent. Head moderately large, densely, very finely punctate, armed with an exceedingly stout, short, compressed horn on either side between the eyes, the space between them deeply excavated, the anterior margin not reflexed, the epistoma with an indistinct prominence on either side in front; antennæ rather elongate, with the seven outer joints moderately widened, 5–10 transverse; prothorax transverse, much wider at the base than at the apex, the sides a little rounded anteriorly, almost straight behind, the surface densely, very finely punctate; elytra moderately elongate, parallel in their basal half, deeply punctate-striate, the interstices feebly convex, closely, minutely punctate, the humeri sharply rectangular.

Length 4 millim.

Hab. MEXICO, Acapulco (*Höge*).

Though we have only received a mutilated example of this species, it is advisable to name it. *A. occidentalis* is not very closely allied to any other member of the genus known to me. The cephalic horns are exceedingly stout, short, and compressed; it is probable that they vary in length, as in some of the allied species. The punctuation of the head and thorax is very fine and dense.

PLATYDEMA (p. 181).

Platydema excavatum (p. 184).

To the localities given, add:—MEXICO, Temax in North Yucatan (*Gaumer*); HONDURAS, Ruatan I. (*Gaumer*).

Many specimens.

Platydema agile (p. 187).

To the localities given, add:—GUATEMALA, Coban (*Conradt*).

Platydema subquadratum (p. 188).

To the localities given, add:—MEXICO, Cuernavaca (*Flohr*), Temax in North Yucatan (*Gaumer*); HONDURAS, Ruatan I., Bonacca I. (*Gaumer*).

Sent in abundance from Temax and Ruatan Island.

Platydema ferrugineum (p. 190).

To the localities given, add:—MEXICO, Temax in North Yucatan (*Gaumer*), Tapachula in Chiapas (*Höge*).

Platydema rotundatum (p. 191).

To the localities given, add:—MEXICO, Amula and Xucumanatlan in Guerrero (*H. H. Smith*), Cuernavaca (*Flohr*), Temax in North Yucatan (*Gaumer*).

Platydema diophthalmum (p. 193).

To the localities given, add:—MEXICO, Temax in North Yucatan (*Gaumer*); HONDURAS, Ruatan Island (*Gaumer*).

Sent in plenty from both localities.

Platydema fasciatum (p. 193).

In my remarks about this species, on p. 194, the head is incorrectly stated to be "rather coarsely punctured;" this remark applies to *P. submaculatum*, the head in *P. fasciatum* being very finely, sparsely punctate.

Platydema submaculatum (p. 194).

To the localities given, add:—MEXICO, Temax in North Yucatan (*Gaumer*).

Platydema högei (p. 195).

To the Mexican localities given, add:—Omilteme in Guerrero (*H. H. Smith*).

Platydema biplagiatum (p. 201).

To the localities given, add :—GUATEMALA, Coban (*Conradt*).

Platydema cordovense (p. 203).

To the locality given, add :—GUATEMALA, Coban (*Conradt*).

A single mutilated example from Guatemala seems to belong here. It is larger than the type, and the elytra have the suture entirely testaceous, and the median discal spot smaller and more rounded.

46. **Platydema concolor.**

Platydema unicolor, huj. op. p. 203, Tab. IX. fig. 11 (nec Chevr.).

LIODEMA (p. 205).

Liodema obydense (p. 206).

A specimen of this species, and also one of *L. serricorne*, has been received from Temax in North Yucatan (*Gaumer*).

HAPSIDA (p. 211).

Hapsida belti (p. 213).

To the localities given, add :—MEXICO, Frontera in Tabasco (*Höge*), Temax in North Yucatan (*Gaumer*).

This brilliantly-coloured insect has been sent in abundance from Yucatan.

Hapsida terebrans (p. 214).

To the localities given, add :—MEXICO, Teapa in Tabasco (*H. H. Smith*).

Three specimens, differing from the type in their smaller size and narrower shape, and in having the elytra æneous, with the serial punctures coarser on the disc.

ENNEBŒUS. (To follow the genus *Gonospa*, p. 217.)

Ennebœus, C. O. Waterhouse, Trans. Ent. Soc. Lond. 1878, p. 228.

This genus was proposed by Mr. Waterhouse for a Tasmanian insect, *E. ovalis*, Wat. The American species described below are perfectly congeneric with it, one of them, *E. uniformis*, being extremely close to *E. ovalis*. The geographical distribution of *Ennebœus* is therefore a very remarkable one. The antennæ are slender, the apical three joints forming a laxly articulated club (Mr. Waterhouse describes the ninth and tenth joints as forming a distinct but not a large club), the last joint abruptly truncate

at the apex. The prosternum is broadly, subhorizontally produced behind, the apex being deeply excavate beneath for the reception of the convex, declivous mesosternum, the latter having a long, oblique groove on either side. The intermediate coxal cavities are widely open externally, the trochantin being large and prominent. The hind coxæ are transverse. The intercoxal process of the abdomen is narrow, triangular. The head in repose is so deeply sunk into the prothorax that the eyes are partly hidden; the epistoma is large and separated from the front by a very faintly impressed line. The tibial spurs are short.

1. **Ennebœus uniformis.** (Tab. XXIII. figg. 4; 4 *a*, antenna.)

Elliptic, convex, shining, pitchy-black, the head, and sometimes the base, suture, and apex of the elytra indeterminately, ferruginous; above and beneath very densely, minutely punctured, and uniformly clothed with pruinose greyish pubescence. Antennæ rufo-testaceous, very slender, the joints 9–11 forming a narrow club—9 triangular, slightly longer than broad, 10 as broad as long, 11 a little longer than 10; prothorax strongly transverse, the sides rounded and converging from the base; elytra very closely fitting to the base of the prothorax, and at the sides forming almost a continuous outline with it, usually with very indistinct rows of shallow, coarser punctures on the basal half towards the suture; beneath pitchy-brown, the epipleuræ more or less ferruginous; legs rufo-testaceous.

Length 3–3½ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 5000 feet (*Champion*).

Four examples. Extremely close to *E. ovalis*, Wat., but more convex and slightly smaller, the antennæ with the apical three joints less widened and more elongate.

2. **Ennebœus marmoratus.**

Elliptic, convex, shining, pitchy-black, the head rufous, the sides of the prothorax anteriorly, the humeri, and the apices of the elytra obscure ferruginous, the antennæ and legs rufo-testaceous, the femora and tibiæ slightly darker; above and beneath very densely, minutely punctured; the upper surface pruinose-pubescent, the elytra with irregular dark brown spots which tend to form fasciæ. Antennæ slender, joints 9–11 forming a rather broad club—9 triangular, as long as broad, 10 and 11 transverse; prothorax moderately transverse, rapidly narrowing from the base; elytra with faint irregular rows of coarser, not very closely-placed punctures on the basal half towards the suture.

Length 4 millim.

Hab. Mexico, Jalapa and Misantla (*Flohr*).

A single specimen of this species has been forwarded to us by Mr. Flohr. Larger and broader than *E. uniformis*, the thorax less transverse, the club of the antennæ shorter, the serial punctures on the disc of the elytra a little more distinct, and the pubescence of the upper surface not uniform in colour, but interrupted by dark brown spots which tend to form fasciæ. A closely allied species occurs in Colombia *.

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* **Ennebœus seriatus.**

Pitchy-black or pitchy-brown, the antennæ and legs obscure rufo-testaceous, above and beneath very densely, minutely punctured; the pubescence of the upper surface pruinose, that on the elytra yellowish-grey,

PHALERIA (p. 217).

Phaleria guatemalensis (p. 218).

To the locality given, add:—MEXICO, Mazatlan (*Höge*).

Sent in abundance from Mazatlan on the Pacific coast. Mexican specimens differ from those from Guatemala in having the elytral markings entirely obliterated, or, at most, represented by a post-median sutural streak and a small discoidal spot.

Phaleria dytiscoides (p. 218).

To the localities given, add:—MEXICO, Mazatlan (*Höge*).

Also sent in abundance from Mazatlan. *P. panamensis* is perhaps a variety of this species; but it is duller and comparatively less elongate, the elytra are much more variable in colour, the thorax is more transverse, a little less narrowed in front, and usually testaceous, or, at most, with the base infuscate.

Phaleria pilatei (p. 220).

Three specimens of a *Phaleria* from Vera Cruz (*Höge*, *Flohr*) agree with Chevrolat's description of *P. pilatei*, except that they have not the head "inter oculos dense sulcato, dein arcuatim costato."

Phaleria insularis (p. 221).

To the Mexican locality given, add:—Mazatlan (*Höge*).

Many specimens from the Pacific coast, agreeing with those from the adjacent islands.

BYCREA (p. 221).

Bycrea villosa (p. 222).

To the Mexican localities given, add:—Atlixco in Puebla (*F. D. G.*), Santo Domingo Tehuantepec (*Richardson*).

Found in numbers by Mr. Godman in the nests of *Œcodoma cephalotes*.

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apparently with brown patches; the elytra with irregular rows of very distinct, rather coarse punctures, which extend outwards to the lateral margin but not to the apex.

Length 4⅓ millim.

Hab. COLOMBIA, Bogota (*coll. F. Bates*).

Two examples. Readily separable from *E. marmoratus* by the very distinct irregular series of rather coarse punctures on the basal two thirds of the elytra, the pubescence on the latter not forming angulated fasciæ.

SCAPTES (p. 222).

1. **Scaptes tropicus.**

Asida tropica, Kirsch, Berl. ent. Zeitschr. 1866, p. 190 [1].
Scaptes squamulatus, huj. op. p. 222, Tab. X. figg. 6, 6 *a, b* (1886) [2].
Ulus squamulatus, Fleut. & Sallé, Ann. Soc. Ent. Fr. 1889, p. 422 [3].

To the localities given, add :—COLOMBIA, Bogota [1]; ANTILLES, Guadaloupe [2].

There can be little doubt that the above synonymy is correct, though Kirsch does not mention the form of the head, antennæ, &c., and the insect bears no relation to *Asida.* The elytra, as well as the thorax, are fimbriate at the sides. MM. Fleutiaux and Sallé [3] sink *Scaptes* as synonymous with *Ulus,* Horn, which it resembles in the shape of the anterior tibiæ; *Scaptes,* however, has the head, antennæ, thorax, and prosternum differently formed, and the eyes not entirely divided. It would, perhaps, be better placed in the Opatrides.

GONIADERA (p. 229).

Goniadera alternata (p. 231).

Mr. Flohr informs me that this insect occurs at Atoyac in the State of Vera Cruz.

ÆMYMONE. (To precede the genus *Anœdus,* p. 233.)

Æmymone, F. Bates, Trans. Ent. Soc. Lond. 1868, p. 314 nota.

This generic name * was proposed by Mr. F. Bates for the South-American *Goniadera cariosa,* Fairm. *Æmymone* chiefly differs from *Anœdus* in having the thorax subtruncate at the base (without median lobe) and the elytra crenate-striate, and from *Goniadera* in having the penultimate joint of the tarsi lamellate beneath. A single species from Mexico, specimens of which have recently been forwarded to me by Mr. Flohr, belongs to it. *Æ. crenata* has much the facies of an *Adelium.*

1. **Æmymone crenata.** (Tab. XXIII. fig. 5.)

Elongate-oval, moderately broad, rather depressed, æneous, shining. Head very coarsely, irregularly punctate, broadly transversely depressed in front; the eyes coarsely granulated, widely separated, moderately large; antennæ pitchy-brown, about reaching the base of the prothorax, joint 3 about three times the length of 2 and a little longer than 4, 4–10 gradually decreasing in length, 10 transverse, 11 much longer and stouter than 10; prothorax transversely convex, nearly twice as broad as long, a little wider at the base than at the apex, widest at the middle, the sides rounded anteriorly and strongly constricted behind, the apex moderately deeply emarginate, the anterior angles rounded, the hind angles rectangular, the base subtruncate, without distinct lateral sinuation, the surface with scattered, irregularly arranged, coarse punctures; elytra much wider than, and about three and a half times as long as, the prothorax, subparallel towards the base, deeply and moderately coarsely crenate-striate, the interstices feebly convex, smooth;

* Omitted from the Munich Catalogue.

beneath æneous, shining, sparsely, coarsely punctate at the sides only, for the rest almost smooth, the epipleuræ with exceedingly coarse punctures; prosternum narrow, convex, declivous behind, slightly produced, the apex with a raised point; mesosternum broadly excavate in front, V-shaped, declivous; legs piceous, the tarsi rufo-testaceous; intermediate and posterior femora and tibiæ ciliate on the inner side in the male.

Length 11½–13, breadth 5–5½ millim. (♂ ♀.)

Hab. MEXICO, Motzorongo in Vera Cruz (*Flohr*).

Three examples. An allied undescribed species from Brazil is contained in Mr. F. Bates's collection.

ANÆDUS (p. 233).

2 (A). **Anædus æneotinctus.**

Oblong-oval, moderately broad, depressed, brownish-piceous with a brassy lustre, shining, sparsely clothed with rather long decumbent hairs, the antennæ, oral organs, and legs rufo-testaceous, the femora slightly infuscate; the entire upper surface densely, coarsely, confusedly punctate, the punctures on the prothorax a little coarser than those on the elytra, those on the apical portion of the latter longitudinally confluent. Head rather small, the eyes not very widely separated, exceedingly coarsely granulated; antennæ moderately stout, only extending to a little beyond the base of the prothorax, joint 3 twice as long as 2 and shorter than 4, 4–10 subequal, longer than broad; prothorax twice as broad as long, broader at the base than at the apex, the sides subangularly dilated a little behind the middle, strongly constricted before the base, and slightly flexuous and rapidly converging anteriorly, the apex deeply emarginate, the anterior angles prominent but obtuse, the base with a broadly truncated median lobe and deeply sinuate on either side between this and the acutely rectangular hind angles; elytra considerably broader than, and nearly four times as long as, the prothorax; beneath pitchy-castaneous, very coarsely, sparsely punctate, the venter smooth in the middle; legs comparatively short.

Length 7½, breadth 3½ millim.

Hab. MEXICO, Acapulco (*Höge*).

One example. Less elongate than *A. interstitialis* and *A. similis*; the head smaller, the eyes less widely separated and more coarsely granulated; the thorax broader, deeply emarginate at the apex, and more deeply sinuate on either side at the base; the antennæ and legs much shorter; the under surface coarsely punctured.

2 (B). **Anædus villosus.** (Tab. XXIII. fig. 6.)

Oblong-oval, broad, depressed, pitchy-black with an æneous lustre, shining, somewhat thickly clothed with long, suberect hairs; the entire upper surface densely, coarsely, confusedly punctate, the punctures on the prothorax coarser than those on the elytra, those on the apical portion of the latter longitudinally confluent. Head as in *A. æneotinctus*, the oral organs rufo-testaceous; antennæ stout, extending to a little beyond the base of the prothorax, piceous, joints 1–3 and the outer half of 11 rufo-testaceous, 3 twice as long as 2 and shorter than 4, 4–10 subequal in length and slightly increasing in width, 9 and 10 about as broad as long, 11 very much longer than 10; prothorax twice as broad as long, the sides dilated a little behind the middle, strongly constricted before the base, and obliquely converging anteriorly, the apex broadly but not very deeply emarginate, the anterior angles obtuse, the base with a broad, feebly emarginate median lobe and deeply sinuate on either side between this and the acute, outwardly-directed hind angles; elytra very little wider than, and barely three and a half times as long as, the prothorax; beneath piceous, very coarsely punctate, the venter with widely scattered much finer punctures; legs rather short, rufo-testaceous, the femora slightly infuscate.

Length 7½, breadth 4 millim.

Hab. Guatemala, Coban in Vera Paz (*Conradt*).

One example. Relatively broader than *A. æneotinctus*; the thorax nearly as wide as the elytra, still more coarsely punctate, with more acute hind angles, and the base feebly emarginate in the middle; the antennæ stouter; the pubescence suberect and longer; the ventral surface more sparsely and more finely punctate. A closely allied form occurs in Colombia.

Anædus setulosus (p. 237).

To the localities given, add:—Mexico, Teapa in Tabasco (*H. H. Smith*).

Two examples of the typical form.

PARATENETUS (p. 238).

Storthephora, Mäklin, Act. Soc. Fenn. x. pp. 635, 658 (1875).

As noted on p. 243, several small species of this genus were accidentally overlooked till it was too late to insert them in their proper place. Amongst these there are three which have the anterior tibiæ unarmed in the male.

Storthephora is referred by Mäklin to the Lagriidæ.

Paratenetus tibialis (p. 239).

To the localities given, add:—Mexico, Acapulco (*Höge*), Motzorongo (*Flohr*), Teapa in Tabasco (*H. H. Smith*, *Höge*).

Sent in abundance from Teapa.

Paratenetus grandicornis (p. 239).

Two examples (♂) of a minute *Paratenetus* ($1\frac{7}{8}$ millim. in length) from Chontales, Nicaragua (*Janson*), nearly agree with Motschulsky's brief description, quoted on p. 239. They have the club of the antennæ piceous and very large (joints 9 and 10 rather broader than long), the other joints testaceous; the eyes prominent; the thorax finely denticulate at the sides; the entire upper surface closely, confusedly, moderately coarsely punctate; the anterior tibiæ unarmed.

This is the smallest member of the genus known to me.

2 (a). **Paratenetus nigricornis.** (Tab. XXIII. figg. 7, ♂; 7 *a*, antenna.)

Moderately convex, shining, piceous or pitchy-brown, the elytra sometimes entirely, sometimes with the humeri only, reddish-brown; the upper surface clothed with short, decumbent hairs, and closely, confusedly, moderately coarsely punctate, the punctures on the prothorax a little finer than those on the elytra. Antennæ black, the basal joints sometimes pitchy-testaceous—(♂) elongate, with joints 9–11 forming an elongate, exceedingly stout club, 8 and 9 about as broad as long, 11 considerably longer than 10, (♀) shorter, with shorter and much more slender club, joints 8 and 9 strongly transverse; prothorax

convex, rather narrow, moderately transverse, about equal in width at the base and apex, the sides a little rounded and finely denticulate; legs varying in colour from piceous (with the tarsi paler) to entirely testaceous; anterior tibiæ unarmed in both sexes.

Length $2\frac{1}{4}$–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. MEXICO, Motzorongo (*Flohr*), Teapa in Tabasco (*H. H. Smith*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, San Juan, Chiacam, Cahabon, and Tamahu in Vera Paz (*Champion*).

Many specimens, all from the Atlantic slope. A little larger than *P. grandicornis*; the antennæ almost or entirely black, with a longer and much stouter club in the male; the head and thorax, at least, piceous. The elytra are usually piceous or pitchy-brown, with the shoulders reddish-brown. One of the two specimens from Belize (a female) has the thorax and elytra more coarsely punctate, and it may belong to another species. Compared with the allied forms, *P. nigricornis* has an unusually narrow convex thorax.

2 (B). Paratenetus inermis.

Reddish- or fusco-testaceous; the upper surface coarsely, densely, confusedly punctate, clothed with long, fine, decumbent hairs. Antennæ rufo-testaceous, with the club pitchy-brown or pitchy-testaceous, the latter long and stout in the male, with joints 9 and 10 almost as long as broad, shorter and very much smaller, and with joints 9 and 10 transverse, in the female; prothorax strongly transverse, moderately convex, about equal in width at the base and apex, the sides feebly rounded, finely denticulate, and slightly converging behind; legs rufo-testaceous; anterior tibiæ unarmed in both sexes.

Length $2\frac{1}{2}$–$2\frac{2}{3}$ millim. (♂ ♀.)

Hab. GUATEMALA, El Tumbador, Zapote, Capetillo, Calderas, Guatemala city (*Champion*).

In the unarmed anterior tibiæ in the male this species resembles *P. nigricornis* and *P. tropicalis*; it differs from the latter in the much longer and stouter club to the male antenna, and is also a little larger and more robust, the thorax is more transverse, and the punctuation of the upper surface is coarser. *P. nigricornis* has the antennæ almost entirely black, the club still larger in the male, and the thorax narrower and more convex.

The description is chiefly taken from two male specimens, the females being somewhat doubtfully referred to the same species.

5. Paratenetus punctulatus.

Paratenetus punctatus, huj. op. p. 241 (nec Spin.).

Moderately convex, shining, testaceous or pitchy-testaceous, the head and prothorax usually darker, or of a more rufous colour, than the elytra; the upper surface thickly clothed with long, semi-erect hairs, densely, coarsely, confusedly punctured, the punctures on the head and prothorax very dense and partly confluent. Antennæ testaceous, with the club piceous or infuscate, the latter similarly formed in both sexes, moderately stout, joints 9 and 10 transverse: prothorax transverse, convex, the sides a little rounded and coarsely denticulate, the hind angles acute; elytra with scattered, feeble, tubercular elevations towards the sides and apex; legs testaceous, the femora and tibiæ sometimes a little darker.

♂. Anterior tibiæ with a sharp tooth before the middle beneath; the intermediate tibiæ sinuous within and slightly curved, their inner apical angle somewhat produced.

Length 3–3½ millim. (♂ ♀.)

Hab. Mexico, Motzorongo (*Flohr*), Jalapa, Teapa in Tabasco (*Höge*), Frontera in Tabasco (*H. H. Smith*); British Honduras, R. Sarstoon (*Blancaneaux*).

Nine examples. This insect, of which we have received several additional specimens, was somewhat doubtfully referred by me to *P. punctatus*, Spin. It differs from that species in the much finer punctuation of the upper surface (the sculpture in *P. punctatus* being unusually coarse), and in the elytra having scattered, very feeble tubercular elevations towards the sides and apex *. These elevations are not easily discernible when the pubescence is dirty or matted.

5 (A). **Paratenetus constrictus.** (Tab. XXIII. figg. 8, ♂; 8 *a*, antenna.)

Convex, shining, ferruginous or flavo-ferruginous; the upper surface somewhat thickly clothed with long, semi-erect hairs, moderately coarsely, rather densely, confusedly punctate, the punctures becoming coarser towards the base of the elytra. Antennæ rufo-testaceous, with the club piceous (the apical joint somewhat paler), the latter moderately stout, almost similarly formed in the two sexes, with joints 9 and 10 transverse; prothorax transverse, convex, rounded at the sides anteriorly, and a little narrowed behind, the sides moderately coarsely denticulate, the hind angles acute; legs rufo-testaceous; anterior tibiæ armed with a short tooth on the lower side at the middle in the male.

Length 2½–3¼ millim. (♂ ♀.)

Hab. Mexico, Atoyac (*Flohr*), Jalapa, Frontera in Tabasco, Tapachula in Chiapas (*Höge*), Teapa in Tabasco (*H. H. Smith*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Chacoj and San Juan in Vera Paz, El Tumbador (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

This is a common insect on the Atlantic slope, and it has been sent in abundance from Teapa; from the Pacific side very few specimens have been received. Allied to *P. punctulatus*, but smaller and more convex, the punctuation of the upper surface less dense, especially on the head and thorax, and becoming coarser towards the base of the elytra; the thorax a little narrowed behind, and less coarsely denticulate; the elytra without scattered feeble elevations towards the sides and apex. The antennæ sometimes have the club a little paler in colour. The elytral punctuation is slightly variable, but it usually becomes much finer towards the apex.

P. cribratus, Motsch., from Georgia, and *P. denticollis* (Mäkl.), from Venezuela, are allied forms; the latter has the antennæ pallid testaceous, and appears to have a more transverse, more rugosely punctured thorax.

11 (A). **Paratenetus sexdentatus.** (Tab. XXIII. fig. 9, ♂.)

Rufo-testaceous, the upper surface densely, confusedly, rather finely punctate, clothed with fine, decumbent hairs. Antennæ rufo-testaceous, the club slightly darker, the latter moderately stout, very similarly

* *P. ruficornis* has the elytra somewhat similarly sculptured, though not noticed in the description.

formed in both sexes, with joints 9 and 10 transverse; prothorax transverse, the sides a little rounded, and armed at the apex with a long, outwardly projecting, obtuse tooth (forming the anterior angle), between which and the base are five short teeth (the posterior one forming the hind angle); legs rufo-testaceous; anterior tibiæ with a distinct tooth about the middle beneath in the male.

Length $2\frac{1}{3}$–$2\frac{1}{2}$ millim. (♂ ♀.)

Hab. British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Cubilguitz (*Champion*).

Four examples. Closely allied to *P.* (*Storthephora*) *auritus*, Mäkl., from Brazil, and *P. denticulatus*, Ch., from Chiriqui; it differs from the latter in having the anterior thoracic tooth less oblique, more obtuse at the apex, and more prominent, the other teeth shorter. The anterior tooth projects outwards to far beyond the eyes, and, owing to the other teeth being short, it is apparently longer than in *P. denticulatus*. The description of *Storthephora aurita* nearly agrees with *P. denticulatus*, except that the smaller thoracic teeth appear to be longer (the ante-apical one being very prominent) in the Chiriqui insect.

Paratenetus tropicalis (p. 243).

To the locality given, add:—Mexico, Motzorongo (*Flohr*), Jalapa (*Höge*), Teapa in Tabasco (*Höge*, *H. H. Smith*); British Honduras, Belize (*Blancaneaux*); Guatemala, near the city (*Champion*, *Salvin*), Dueñas, Zapote (*Champion*); Panama, Taboga I. (*Champion*).

Numerous specimens of a small *Paratenetus* from the above localities are perhaps referable to *P. tropicalis*, Motschulsky. They agree with his few words of description, but differ greatly from his figure (t. 3. fig. 7), which represents a very different insect *. These specimens resemble *P. denticulatus* and *P. sexdentatus* in size and sculpture, and in the rather small club to the antennæ, but they have the thorax very finely denticulate at the sides and without prominent tooth at the anterior angle. The antennæ are considerably longer in the male than in the female, with the club not very stout; the latter varies in colour from entirely ferruginous to pitchy-brown, sometimes pitchy-brown with the apical joint testaceous, and joints 9 and 10 are more transverse in the female than in the male. The anterior tibiæ in the male are unarmed.

ACROPTERON (p. 252).

Acropteron agriloides (p. 255).

To the localities given, add:—Mexico, Omilteme in Guerrero, Teapa in Tabasco (*H. H. Smith*), Tapachula in Chiapas (*Höge*).

* This figure (7) is, perhaps, intended for *Terametus capicola*, Motsch. As regards the antennæ, the figure (7 *b*) agrees with the male of our insect. In several other cases the figures quoted by the author in the text do not agree with the plate.

ISCHYOMIUS (p. 258).

This genus, for which I have proposed the group Ischyomiides, as already noted (Col. iv. pt. 2, p. 75), would be better placed in the Melandryidæ.

OXIDATES (p. 263).

Oxidates princeps (p. 265).

To the Mexican locality given, add:—Jalapa (*Höge*).

Four specimens, including both sexes.

8. **Oxidates gibbus.** (Tab. XXIII. fig. 10.)

Short, black, slightly shining. Head very finely, rather sparsely punctate, coarsely and confluently so between the eyes; antennæ comparatively short, extending very little beyond the base of the prothorax, thickened towards the apex, the apical joint very stout, oval; prothorax transversely convex, short, more than one-half broader than long, about equal in width at the base and apex, the sides with a very prominent, reflexed marginal carina, broadly rounded anteriorly, and abruptly constricted immediately before the base, the base very deeply grooved within, the hind angles obtusely rectangular, the surface very finely, somewhat closely punctate; elytra strongly gibbous, short, abruptly declivous from the middle, with irregular rows of exceedingly large and deep, partly confluent impressions; beneath shining, almost smooth; prosternum deeply excavate along the middle, slightly declivous and strongly produced behind, the apex convexly raised; mesosternum feebly excavate in front; legs black.

Length 6, breadth $3\frac{1}{3}$ millim.

Hab. Mexico, Misantla (*Flohr*).

One specimen. Smaller and shorter than any of the other known members of the genus; the thorax strongly transverse and with the sides very sharply margined; the antennæ comparatively short; the elytra with exceedingly large and deep, partly confluent excavations; the prosternal process convexly raised at the apex.

9. **Oxidates elongatus.**

♂. Elongate, dull black. Head smooth; antennæ elongate, slender, the third joint longer than the fourth; prothorax transversely convex, a little broader than long, the sides rounded anteriorly and slightly converging behind, the lateral carina not prominent and (except towards the apex) scarcely visible from above, the hind angles obtusely rectangular, the base towards the sides deeply transversely grooved within and with a shallow marginal groove, the surface smooth towards the sides, the middle of the disc exceedingly minutely, closely punctate; elytra oval, more than twice as long as the prothorax, transversely convex, abruptly declivous behind, with rows of moderately coarse, distantly placed, foveate impressions, which become deeper towards the sides behind, the interstices smooth; beneath smooth, shining; prosternum deeply sulcate on either side between the coxæ, abruptly declivous and produced behind, the apex strongly raised; first ventral segment deeply transversely depressed in the middle at the base; the tibiæ bowed inwards and slightly sinuous, the hind pair strongly so, the latter with about the apical fourth densely pubescent within.

Length $16\frac{1}{2}$, breadth $7\frac{1}{4}$ millim.

Hab. Mexico, Mochitlan in Guerrero (*Baron*).

One specimen. This species connects *Mitys* with *Oxidates*, the present insect having

the general shape of the former and the elytral sculpture of the latter. For the present, however, *Oxidates* can be retained for those species with foveolate elytra. In the form of the prosternum it approaches *O. gibbus*.

HEGEMONA (p. 267).

Hegemona retrodentatus (p. 270).

To the Mexican locality given, add :—Talea and Yolotepec, both in Oaxaca (*Flohr*).

Two male specimens, agreeing well with Allard's description. These differ from the same sex of the closely allied *H. bicaudatus* in their broader, more robust shape, and in the subangularly produced and slightly divergent apices of the elytra. It is probable that the apices of the elytra, as in *H. hondurensis*, are similarly formed in both sexes. Of *H. bicaudatus* an additional male example has been received from Coban (*Conradt*).

5 (A). Hegemona refulgens.

Elongate, somewhat compressed, the head and prothorax dark bronze, rather dull, slightly tinged with cupreous towards the sides; the elytra shining, bronzy-cupreous or cupreous, with the bottom of each of the grooves (more distinctly so when viewed laterally) more or less metallic green; beneath very shining, æneous, with coppery and metallic green reflections. Head almost smooth; antennæ very elongate and slender; prothorax transversely convex, broader than long, subquadrate, the sides slightly converging in front and behind, the anterior angles rounded but rather prominent, the hind angles very obtuse, the surface smooth at the sides, very minutely, somewhat thickly punctate on the middle of the disc; elytra elongate-oval, slightly compressed at the sides, moderately gibbous, and produced at the apex, very deeply striate, the striæ feebly punctured, the interstices considerably raised, very strongly and subangularly so towards the sides and apex, the fifth more or less elevated at the apex in both sexes (more distinctly so in the female, but not projecting beyond the apex of the elytra), the apices conjointly rounded; prosternum strongly produced, the apex raised; beneath almost smooth, the fifth ventral segment slightly depressed in the middle in the male.

Length 21-25 millim. (♂ ♀.)

Hab. GUATEMALA, Coban (*Conradt*).

One female and three male examples. Allied to *H. compressus* and *H. lineatus*, but differing from both in the strongly, subangularly raised elytral interstices. The thorax has the anterior and posterior angles very obtuse (as in *H. bicaudatus* &c). The elytral grooves are more or less metallic green at the bottom, this being more distinct when the insect is viewed from the side.

In the subangularly raised elytral interstices *H. refulgens* approaches *H. filibuster* and *H. interruptus*; these latter, however, have broader and more gibbous elytra, with the interstices uneven. Mr. Conradt obtained specimens of five species of *Hegemona* at Coban.

Hegemona chiriquensis (p. 273).

To the localities given, add :—COSTA RICA (*Mus. Brit.*).

NAUTES (p. 277).

As I have already stated, the genera *Nautes* and *Tarpela* are only provisionally adopted here. The exotic Helopides require a thorough revision.

Nautes varians (p. 281).

The antennæ of this species are moderately long in the male, shorter in the female, with the apical three joints flattened and considerably dilated in both sexes—9 and 10 longer than broad in the male, as broad as long in the female. The specimens treated as a variety should be separated.

6 (A). **Nautes stabilis.**

Nautes varians, var., huj. op. p. 281.

To the Mexican localities given, add :—Cuesta de Misantla (*Flohr*).

The chief differences between this insect, of which females only have been received as yet, and *N. varians* have already been noted; it should also be added that the antennæ (♀) are much shorter, extending very little beyond the base of the thorax, and have their ninth and tenth joints transverse; the thorax is not only more coarsely, but more uniformly punctured (in *N. varians* the punctures are more scattered and finer on the middle of the disc, and here show a tendency to become oblong in shape); the elytral interstices are more distinctly punctured, as well as being more convex.

6 (B). **Nautes alternans.**

Short ovate, rather broad, convex, the head and prothorax suffused with cupreous, metallic green, and golden, the elytra alternately and indeterminately striped with the same colours; the upper surface shining, glabrous. Head coarsely, densely punctate, the eyes prominent; antennæ piceous, becoming testaceous towards the base, reaching to about the middle of the elytra, very slender at the base, and gradually thickening outwardly, the joints (1 and 2 excepted) elongate, 9 and 10 elongate-triangular; prothorax more than twice as broad as long, strongly bisinuate at the base and rather feebly emarginate at the apex, the sides moderately rounded and converging from the base, the anterior angles rounded and not prominent, the hind angles rectangular, the surface closely, finely punctured—the punctures denser and longitudinally confluent towards the sides, and somewhat oblong in shape, the disc with a narrow space down the middle impunctate; elytra a little wider than the prothorax at the base, slightly rounded at the sides, deeply striate throughout, the striæ indistinctly punctured, the interstices strongly convex towards the sides and apex, feebly so towards the suture anteriorly, smooth; beneath shining, pitchy-testaceous, with an æneous lustre, finely, sparsely punctate, the sides of the metasternum with coarser punctures, the flanks of the prothorax almost smooth; prosternum narrow, subhorizontal, strongly, acuminately produced, and received by the V-shaped mesosternum, the sides of latter moderately raised; legs obscure testaceous, the femora darker.

Length 5, breadth $2\frac{2}{3}$ millim. (♀.)

Hab. GUATEMALA, Zapote (*Champion*).

One specimen. Allied to *N. varians* and *N. incilis*, but with the antennæ much more slender; the elytra alternately striped with metallic colours, the interstices more

convex, and the striæ very faintly punctured; the thorax with less prominent anterior angles; the under surface more sparsely, more finely punctate, the flanks of the prothorax almost smooth.

Nautes striatipennis (p. 283).

To the Mexican locality given, add:—Actopan (*Flohr*).

12 (A). **Nautes tricolor.**

♂. Oblong-ovate, moderately convex, very shining, golden-bronze, the head, prothorax, and elytra here and there suffused with cupreous and metallic green. Head thickly and rather coarsely punctured; antennæ very elongate, rufo-testaceous, slightly darker at the tip; prothorax nearly twice as broad as long, broadly and deeply emarginate at the apex, strongly bisinuate at the base, the sides sharply margined, rounded and converging in front, and sinuate behind, the base very feebly margined, the anterior angles sharp and prominent, the hind angles acute, the surface coarsely, thickly punctate; elytra a little wider than, and more than three times the length of, the prothorax, oval, deeply striate throughout, the striæ becoming exceedingly deep towards the sides and apex and with scattered rather fine punctures, which slightly impinge on the interstices, and become coarser towards the sides, the interstices, except towards the suture anteriorly, very strongly convex and with minute, widely scattered punctures; beneath very shining, æneous, suffused with metallic green, coarsely, rather sparsely punctate, the punctures on the flanks of the prothorax very coarse and partly coalescent, the venter also longitudinally wrinkled; prosternum coarsely punctured, horizontal, strongly produced, and received by the V-shaped mesosternum, the latter vertical in front; legs rufo-testaceous, the femora æneous; anterior tarsi strongly dilated; hind tibiæ slightly sinuous within.

Length 7 millim.

Hab. Mexico, Chinautla (*Flohr*).

One specimen. Allied to *N. versicolor*, but more parallel, with the head and thorax much more coarsely punctured, the thorax less narrowed anteriorly, the elytral striæ still more deeply impressed and more coarsely punctured, and the upper surface less suffused with cupreous.

TARPELA (p. 288).

2 (A). **Tarpela pulchra.** (Tab. XXIII. fig. 12, ♂.)

Oblong-ovate, very convex, more parallel in the male than in the female, the head and prothorax more or less suffused with cupreous, metallic green, and golden, the elytra alternately striped with the same brilliant metallic colours, the suture violaceous, the upper surface very shining and glabrous. Head coarsely, closely punctate, with the punctures on the vertex transverse, broadly transversely depressed in front, the eyes small and prominent; antennæ pitchy-black, moderately long (♂), short (♀), very slender at the base, joints 7 and 8 slightly thickened, elongate-triangular, 9–11 considerably widened—9 nearly as broad as long, triangular, much wider than 8, 10 shorter and more transverse, 11 bluntly rounded at the tip, a little longer than 10; prothorax transverse, with the disc strongly longitudinally convex, flatter towards the sides, the sides slightly sinuate behind the middle, parallel at the base, and rounded and converging in front, the apex broadly and very deeply emarginate, the base strongly bisinuate, finely margined, the hind angles sharply rectangular, the anterior angles strongly, subacutely produced, the entire surface rather thickly punctured, the punctures very deep, coarse, and oblong in shape, the marginal carina very fine; elytra short, gibbous, wider than the prothorax, a little rounded at the sides in the female, more parallel in the male, somewhat compressed before the apex, very deeply striate through-

out, the striæ with series of oblong, coarse, deep punctures, which become coarser, deeper, and confluent towards the sides, and much finer and shallower towards the suture, the scutellar stria very deep, the interstices convex, smooth, the humeri distinct; beneath pitchy-black with an æneous lustre, shining, coarsely punctured, the flanks of the prothorax with very deep oblong impressions, the ventral surface sparsely, more finely punctate, and finely longitudinally wrinkled; the first and second segments flattened, densely, minutely punctured, and puhescent in the middle in the male; prosternum narrow, acutely produced and slightly declivous behind, the mesosternum V-shaped, moderately raised; metasternum exceedingly short; intercoxal process triangular, sharply margined; legs short, pitchy-black with an æneous lustre, roughly punctured; the anterior tarsi with the basal joints moderately dilated in the male.

Length 4–5, breadth 2–2½ millim. (♂ ♀.)

Hab. Mexico, Atoyac in Vera Cruz (*Flohr*).

Five examples of this brilliantly-coloured insect have been received. It resembles *T. eximia* in colour, but has more gibbous elytra, much smaller eyes, differently shaped antennæ, pro-, and mesosterna, &c. In the form of the antennæ it approaches *Nautes antennatus*. The species might almost equally well be placed in *Nautes*. This is one of many interesting forms for the discovery of which we are indebted to Mr. Julius Flohr.

Tarpela durangoensis (p. 292).

This species, and *T. corpulenta* also, would perhaps be better placed in the genus *Helops*.

8 (A). **Tarpela catenulata.** (Tab. XXIII. fig. 11, ♂.)

Moderately elongate, subparallel, dark brownish bronze, or obscure ferruginous with a brassy lustre; the head and prothorax very sparsely clothed with short, appressed hairs, the elytra with one or two rows of widely scattered, erect, short, slightly clavate hairs on each interstice. Head coarsely, closely punctate; antennæ ferruginous with the tip a little darker, moderately long; prothorax strongly transverse, broadly and very deeply emarginate in front, feebly bisinuate at the base, slightly wider at the base than at the apex, the sides sinuate towards the base, rounded and converging in front, the lateral margin crenulate towards the apex, the anterior angles very strongly and somewhat obliquely produced in front, rather obtuse at the tip, the hind angles acutely rectangular, the surface coarsely, closely punctate, very uneven, the basal foveæ deep; elytra moderately elongate, wider than the prothorax, subparallel to beyond the middle, with regular rows of coarse, deep, oblong impressions, the impressions closely placed and each impinged upon on either side at the middle by a raised point projecting from the interspaces (the impressions thus appearing O-shaped), the interspaces each with one or two rows of very widely scattered excessively minute setiferous punctures, the third, fifth, and seventh more or less raised, the humeri obtuse; beneath æneous, shining, very coarsely, closely punctate, the flanks of the prothorax very coarsely, longitudinally strigose; prosternum horizontal, acutely produced, and received by the deeply excavate V-shaped mesosternum, the latter vertical in front; anterior tarsi scarcely dilated in the male.

Length 4½–8½ millim. (♂ ♀.)

Hab. Mexico, Temax in North Yucatan (*Gaumer*).

Sent in plenty by Mr. Gaumer. Differs from *T. browni*, *T. thoracica*, *T. costata*, &c., by the peculiar sculpture of the elytra; and from *T. browni* also by the form of the pro- and mesosterna. The elytra bear scattered, serially arranged, subclavate hairs; the punctures from which they arise are scarcely visible.

Tarpela jalapensis (p. 296).

To the Mexican locality given, add:—Mescala in Guerrero (*H. H. Smith*).

Five specimens.

19 (A). **Tarpela incilis.**

♂. Oblong-ovate, rather broad, convex, dark bronze, slightly shining, glabrous. Head short and broad, densely, finely punctured; antennæ black, reaching to about the basal third of the elytra, gradually thickening outwardly, the third joint not more than one-half longer than the fourth; prothorax moderately convex, broad, short, transversely subquadrate, very feebly margined at the sides, the sides parallel behind and slightly converging anteriorly, the base bisinuate, the apex broadly and feebly emarginate, the hind angles sharply rectangular, the anterior angles sharp and rather prominent, the entire surface very densely, finely punctate, the punctures separate one from another; elytra wider than, and three times as long as, the prothorax, deeply sulcate throughout, the interstices (except towards the suture anteriorly) scarcely wider than the sulci, strongly convex, closely, transversely notched on either side (these notches extending across the sulci), and with a few exceedingly minute punctures, the humeri obtuse but distinct; beneath greenish-æneous, closely punctured—the punctures on the metasternum coarse, those on the venter much finer, the flanks of the prothorax with moderately coarse oblong impressions; the first and second ventral segments densely, finely punctate and pubescent along the middle; prosternum coarsely punctured, acutely produced and slightly declivous behind, the mesosternum V-shaped, feebly excavate, the sides rounded off in front; epipleuræ abbreviated behind; legs densely punctured; anterior tarsi with the three basal joints moderately dilated.

Length $6\frac{2}{3}$, breadth 3 millim.

Hab. Mexico, Plan de Barrancas (*Flohr*).

One specimen. This species is perhaps best placed near *T. torrida*, but is not very closely allied to it. The elytra are deeply sulcate, with the interstices very convex, scarcely wider than the sulci, and transversely notched on either side. The thorax is short and very feebly margined, with rather prominent anterior angles.

21 (A). **Tarpela flohri.**

Moderately elongate, rather convex, subparallel, dark bronze, shining, glabrous. Head densely, moderately finely punctate; antennæ only reaching to about the basal fourth of the elytra in the male, shorter in the female, slender, gradually thickening outwardly; prothorax moderately convex, transverse, very feebly margined at the sides, more distinctly so in front, about equal in width at the base and apex, widest a little before the middle, the sides feebly sinuous and converging anteriorly, constricted and strongly sinuous behind, the base bisinuate, the apex feebly emarginate (subtruncate if viewed from above), the hind angles acute and directed a little outwards, the anterior angles sharp but not produced in front, the surface very densely, moderately finely punctate, the basal foveæ shallow but distinct; elytra considerably wider than, and about three times as long as, the prothorax, subparallel in their basal half, slightly transversely flattened immediately below the base, with rows of moderately coarse, oblong, approximate punctures placed in shallow striæ, the striæ becoming very deep towards the sides and apex, the interstices convex, flatter on the disc, almost smooth, the humeri very obtuse; beneath shining, æneous, closely, finely punctate, the punctures on the metasternum coarser, those on the flanks of the prothorax very shallow, dense, and reticulate; prosternum abruptly declivous behind, the mesosternum very feebly excavate; epipleuræ abbreviated; legs densely punctured, the tibiæ roughly so; anterior tarsi similarly formed in both sexes, the basal joints narrow.

Length 7–9, breadth $2\frac{1}{2}$–4 millim. (♂ ♀.)

Hab. Mexico, Tlaltizapan (*Flohr*).

One pair. This species is allied to *T. socia*, but is less elongate and much more shining; the thorax is more dilated at the sides before the middle, sinuate in front, and constricted behind; the antennæ are very much shorter; the elytral striæ are deeply impressed at the apex, the interstices convex towards the sides and apex. The basal ventral segments in the male are not more densely punctured and pubescent in the middle as in some of the allied forms.

Tarpela subparallela (p. 300).

To the locality Mexico, add:—Rancho Alvarez in San Luis Potosi (*Flohr*).

One male specimen, agreeing with the type.

24 (A). **Tarpela foveolata.**

♂. Elongate, subparallel, moderately convex, brownish-piceous, feebly shining, glabrous. Head densely, coarsely punctured between the eyes, more finely so in front, the antennary orbits somewhat dilated; antennæ ferruginous, rather slender, elongate, the third joint exceedingly long; prothorax moderately convex, subquadrate, very little broader than long, feebly margined, widest at one-third from the apex, the sides a little rounded anteriorly, and gradually converging from the middle to the base, the base and apex (viewed from above) truncate, the anterior angles obtuse, the hind angles subrectangular, the surface very densely and rather coarsely punctured, the basal foveæ distinct; elytra a little wider than, and about two and a half times as long as, the prothorax, subparallel to beyond the middle, with regular rows of very coarse, deep, oblong, closely placed punctures, which become shallower at the apex, the bottom of each of these punctures with a minute patch of silvery scales, the interstices narrow (scarcely wider than the punctures), feebly costate towards the sides, flatter on the disc, and with some exceedingly minute scattered punctures, the humeri obtuse but distinct; beneath obscure reddish-brown, shining, coarsely, closely punctured, the punctures on the flanks of the prothorax longitudinally confluent; epipleuræ abbreviated before the apex; prosternum abruptly declivous behind; legs elongate, pitchy-brown, closely punctured; anterior tarsi very feebly dilated.

Length 10, breadth 4 millim.

Hab. Mexico, Tampico (*Flohr*).

One specimen. Nearest allied to *T. subparallela*, but with the thorax wider in front and more densely punctured, the antennæ (♂) longer and more slender, with unusually elongate third joint; the elytra with regular series of very deep, large, oblong, closely placed impressions, at the bottom of each of which is a minute patch of silvery scales, the interstices narrow. The third joint of the antennæ is exceedingly elongate.

Tarpela cupreo-viridis (p. 302).

To the localities given, add:—Temax in North Yucatan (*Gaumer*).

31 (A). **Tarpela ——?**

Hab. Mexico, Dos Arroyos in Guerrero (*H. H. Smith*).

A single specimen of a very distinct species allied to *T. subvittata*, too mutilated for description.

Tarpela depressa (p. 306).

This species, described from a single obscurely-coloured (male) example in M. René Oberthür's collection, has been sent in abundance by Mr. Gaumer from Temax in North Yucatan. It varies greatly in colour—metallic green, bluish-green, or æneous, or brownish piceous with an æneous lustre; the legs, oral organs, and antennæ are more or less ferruginous.

32 (A). **Tarpela nigerrima.**

♀. Elongate, subparallel, slightly depressed, pitchy-black, very shining, glabrous. Head somewhat thickly, finely punctate; antennæ pitchy-black, moderately elongate; prothorax about one-half broader than long, bisinuate at the base and feebly emarginate at the apex, the sides somewhat expanded and sharply margined, feebly sinuate behind, and moderately rounded and converging in front, the anterior angles rounded and not prominent, the hind angles obtusely rectangular, the basal foveæ small but distinct, the surface punctured like that of the head; elytra wider than, and nearly four times as long as, the prothorax, subparallel to beyond the middle, deeply striate, the striæ with series of fine, closely placed punctures, which (like the striæ) become finer towards the suture, the interstices strongly convex towards the sides and apex, feebly so towards the suture, with widely scattered exceedingly minute punctures, the humeri rounded; beneath piceous, shining, very minutely, exceedingly sparsely punctate, the venter a little more closely punctured, the flanks of the prothorax finely strigose; prosternum narrow, declivous and acuminately produced behind; legs piceous, the tarsi paler; body winged.

Length $7\frac{2}{3}$, breadth 3 millim.

Hab. Mexico, Chilpancingo in Guerrero (*H. H. Smith*).

One specimen. Closely allied to *T. depressa*, from Yucatan, but differing from it in the upper surface, legs, and antennæ being pitchy-black; the head and thorax uniformly punctured, the thorax less deeply emarginate in front and relatively narrower; the elytral striæ shallower towards the suture, the inner interstices less convex; the prosternum declivous and less produced behind; and the flanks of the thorax finely strigose.

32 (B). **Tarpela guerreroensis.**

Moderately elongate, subparallel in the male, oblong-ovate in the female, dull blackish-bronze, glabrous. Head thickly, moderately finely punctate, the punctures oblong in shape; antennæ piceous, extending to the middle of the elytra in the male, shorter in the female; prothorax about one-half broader than long, a little wider at the base than at the apex, convex, with the sides flattened and expanded, the base very feebly bisinuate, the apex (viewed from above) truncate, the sides moderately rounded anteriorly and sinuate behind, the anterior angles rounded, the hind angles subrectangular, the lateral margins narrowly reflexed, the surface rather more closely and finely punctured than that of the head, the punctures oblong in shape, the basal foveæ obsolete; elytra wider than, and more than three times as long as, the prothorax, more parallel in the male than in the female, very feebly transversely depressed below the base, finely striate, the striæ with series of oblong, rather closely placed impressions, which become finer towards the suture and a little coarser and deeper towards the sides, those in the marginal stria exceedingly coarse and deep, the interstices flat or feebly convex, smooth, the humeri obtuse; beneath piceous, shining, the metasternum thickly and somewhat coarsely, the ventral segments more finely (the fourth and fifth very minutely), punctured, the flanks of the prothorax finely strigose; the first and second ventral segments broadly flattened, pubescent, and densely punctate in the middle in the male; prosternum abruptly declivous behind; anterior tarsi with joints 1–3 moderately thickened in the male.

Length 6–$6\frac{1}{2}$ millim. (♂ ♀.)

Hab. Mexico, Omilteme and Xucumanatlan in Guerrero, 7000–8000 feet (*H. H. Smith*).

Two specimens. In the male the elytra are more deeply striate than in the female, the striæ with coarser and deeper oblong impressions, which impinge on the interstices, the latter appearing to be transversely wrinkled. This small species is not very closely allied to any of the other Mexican forms known to me. It is of a duller colour than any of the allied species with strongly margined thorax, the elytra being peculiarly sculptured.

37 (A). **Tarpela teapensis.**

♂. Elongate, parallel, rather depressed, very shining, glabrous; the head æneous, the prothorax with the disc broadly, transversely suffused with metallic green, this colour bordered on all sides with cupreous, the margins narrowly golden, the elytra bright golden-bronze. Head densely, not very finely punctate; antennæ pitchy-brown, very elongate; prothorax transversely convex, about one-half broader than long, bisinuate at the base and not very deeply emarginate at the apex, the sides sharply margined, sinuate behind, and converging and moderately rounded in front, the anterior angles rounded and not prominent, the hind angles rectangular, the basal foveæ distinct, the lateral margins somewhat expanded and grooved within, the entire surface exceedingly finely, rather sparsely punctate; elytra wider than, and about three and a half times as long as, the prothorax, flattened on the disc, parallel to beyond the middle, finely and rather lightly striate throughout, the striæ sharply cut, and with series of very fine, oblong, rather closely placed punctures, which become a little more distinct towards the sides and almost obsolete towards the suture, the interstices quite flat, very sparsely, minutely punctate, the humeri obtuse; beneath pitchy-brown, shining, the metasternum with some rather coarse punctures towards the sides, smooth in the middle, the flanks of the prothorax finely, longitudinally strigose the ventral surface very sparsely, minutely punctate, the segments 1–3 broadly flattened, pubescent, and closely punctured along the middle; prosternum narrowly produced and slightly declivous behind, the apex with a small raised point; legs pitchy-brown, the anterior tarsi with joints 1–3 moderately dilated.

Length $9\frac{1}{2}$, breadth $3\frac{2}{3}$ millim.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

One specimen. Allied to *T. silvicola*, from the Pacific slope of Guatemala, but with the elytral striæ deeper and more sharply cut, the punctures in them closer and finer; the elytra are also more elongate, and the thorax is more finely punctured, the latter transversely banded with metallic green, cupreous, and golden. *T. teapensis* is more elongate than *T. sinuaticollis* and *T. puncticeps*, and also differs in various particulars from both these species. The elytral striæ are fine, very sharply cut, and indistinctly punctured.

HELOPS (p. 312).

Helops inanis (p. 316).

Helops funebris, huj. op. p. 316.

To the locality Mexico, add:—Amecameca in Morelos (*Flohr*).

H. funebris was based upon a female example of large size, with the thorax much shorter than in the specimens described by Allard under the name of *Tarpela inanis*.

Helops pueblensis (p. 317).

To the Mexican locality given, add:—Omilteme and Xucumanatlan in Guerrero, 7000 to 8000 feet (*H. H. Smith*).

Six examples, differing from the type (♀) in having the punctures of the elytral striæ coarser, deeper, and a little more scattered. The male has the three basal joints of the anterior tarsi broadly dilated, and the ventral segments 1–3 broadly flattened, densely punctured, and pubescent along the middle.

11 (A). **Helops enitescens.** (Tab. XXIII. fig. 13.)

♀. Obovate, strongly convex, dark bronze, very shining, glabrous. Head thickly, finely punctate, the vertex smoother; antennæ ferruginous, extending nearly to the middle of the elytra; prothorax strongly longitudinally convex, short, finely margined at the sides, the apex (viewed from above) truncate, the base subtruncate, very feebly sinuate on either side, finely margined, and with rather deep foveæ, the sides rounded and moderately converging anteriorly, sinuate behind, the anterior angles strongly declivous, rounded, the hind angles obtusely rectangular, the surface very finely, shallowly, and somewhat closely punctured, the middle of the disc smooth and with a smooth central line, the lateral portions depressed about the middle; scutellum very broad, short; elytra connate, depressed along the suture behind, short, very convex, a little rounded at the sides, broadly subtruncate and slightly wider than the adjacent part of the prothorax at the base, finely striate, the striæ becoming deeper towards the base and with series of fine oblong punctures, the scutellar striæ very deep, the interstices flat throughout, almost smooth, the humeri rather prominent; beneath piceous, almost smooth, the ventral segments 1–3 somewhat closely punctured in the middle and longitudinally wrinkled; prosternum rather broad, declivous behind; metasternum very short.

Length 7½, breadth 4 millim.

Hab. GUATEMALA, Tepan (*Conradt*).

One specimen, from the Los Altos region. This species is allied to the North-American *H. æreus*, Germ., but has a much smoother head and thorax, longer antennæ, &c.; it should be placed near *H. suavis*. *H. enitescens* has somewhat the facies of *Nautes nitidissimus*.

16. **Helops rastratus.**

♀. Elongate, convex, narrow, slightly shining, piceous, the head in front, the oral organs, antennæ, and legs ferruginous. Head large and broad, very densely, somewhat coarsely punctate, the punctures on the vertex longitudinally confluent; last joint of the maxillary palpi subtriangular; antennæ robust, with the outer joints slightly compressed, short, scarcely reaching beyond the base of the prothorax; prothorax longitudinally convex, about one-fourth broader than long, equal in width at the base and apex, widest at the middle, the sides moderately rounded, the base truncate, the anterior angles rounded, the hind angles exceedingly obtuse, the marginal carina not visible from above, the surface punctured like that of the vertex, the punctures longitudinally confluent and forming strigæ; elytra oblong-oval, a little wider than, and about three times as long as, the prothorax, rounded at the sides in front, with rows of oblong, partly confluent, moderately coarse punctures placed in almost obsolete striæ, these punctures becoming finer and shallower towards the sides and apex, the interstices thickly, finely punctate, flat, the third, fifth, and seventh feebly raised at the apex, the humeri completely effaced; beneath shining, ferruginous or obscure ferruginous, sparsely pubescent, closely, coarsely punctate, the flanks of the prothorax very densely punctured, the punctures separate one from another; prosternum declivous behind; legs stout, coarsely punctured; body apterous.

Length 10–10½, breadth 3½ millim.

Hab. Mexico, Paso del Norte in Chihuahua (*Höge*).

Two specimens. Allied to the Californian *H. rugicollis*, Lec., and *H. strigicollis*, Horn, but not agreeing with the description of either of these species. In this and the next two species the apical joint of the maxillary palpi is narrower than usual in the genus *Helops*.

17. **Helops spissicornis.**

♀. Elongate, narrow, convex, slightly shining, piceous or brownish-piceous; the oral organs, antennæ, and legs ferruginous. Head very densely, moderately coarsely punctured, the punctures between the eyes here and there confluent; last joint of the maxillary palpi narrow, subtriangular; antennæ robust, short, scarcely reaching beyond the base of the prothorax; prothorax longitudinally convex, nearly as long as broad, equal in width at the base and apex, widest at the middle, the sides feebly rounded and very faintly margined, the base truncate, the anterior angles rounded, the hind angles very obtuse, the surface punctured like that of the head, but with the punctures separate one from another; elytra oblong-oval, a little wider than, and not quite three times as long as, the prothorax, slightly rounded at the sides and narrowed at the base, with rows of fine, oblong, partly confluent punctures placed in almost obsolete striæ, the punctures becoming coarser towards the suture anteriorly, the interstices thickly, finely punctate, flat, the third, fifth, and seventh feebly raised at the apex, the humeri distinct; beneath shining, obscure ferruginous, sparsely pubescent, very coarsely and rather densely punctured, the punctures on the flanks of the prothorax very dense, separate one from another; prosternum declivous behind; legs stout, coarsely punctured; body apterous.

Length 10–11, breadth $3\frac{1}{2}$–$3\frac{2}{3}$ millim.

Hab. Mexico, Villa Lerdo in Durango (*Höge*).

Two specimens. This species is very similar to *H. rastratus*, but differs from it in having the thorax more cylindrical, nearly as long as broad, more distinctly margined at the sides, and with the punctures separate one from another; the elytra less rounded at the sides in front, and with distinct humeri; the underside more closely and more coarsely punctured. The elytra are very similarly sculptured in both species, of which female specimens only have been received.

18. **Helops seriatoporus.**

♀. Elongate, convex, rather narrow, slightly shining, piceous or rufo-piceous; the oral organs, antennæ, and legs obscure ferruginous. Head very densely, coarsely punctate, the punctures separate one from another; last joint of the maxillary palpi slender, oblong-ovate, truncate at the tip; antennæ moderately stout, extending to far beyond the base of the prothorax; prothorax longitudinally convex, about one-fourth broader than long, almost equal in width at the base and apex, widest at the middle, the sides without marginal carina (except at the base), feebly rounded, sinuate before the base, the hind angles rather prominent, the base truncate, the anterior angles obtuse but distinct, the surface punctured like that of the head, the punctures separate one from another; elytra oblong-elliptic, considerably wider than, and about three times as long as, the prothorax, with rows of oblong, coarse, deep, approximate punctures placed upon almost obsolete striæ, these punctures sharply cut and nearly uniform in size, the interstices thickly, finely punctate, flat, the humeri completely effaced; beneath obscure ferruginous, very coarsely, rather densely punctured, the venter more sparsely punctate, the punctures on the flanks of the prothorax very dense, separate one from another; prosternum declivous behind; legs stout, very coarsely and densely punctured; body apterous.

Length 9–$11\frac{1}{4}$, breadth $3\frac{1}{2}$–$4\frac{1}{4}$ millim.

Hab. Mexico, Paso del Norte in Chihuahua (*Höge*).

Three specimens, all females. This species differs from *H. rastratus* and *H. spissicornis* in having the punctures of the elytral series much coarser, deeper, and more regular, the thorax almost immarginate at the sides and with prominent hind angles (sculptured as in *H. spissicornis*), the antennæ much longer, the elytra subelliptic in shape, the last joint of the maxillary palpi narrower and more ovate. In one specimen the venter is more sparsely punctured.

MENTES. (To follow the genus *Helops*, p. 320.)

Mentum trapezoidal; last joint of the maxillary palpi oblong, subsecuriform, that of the labial pair very broad and stout, truncate at the apex; mandibles bifid at the tip; ligula entire; labrum prominent, separated from the epistoma by a narrow coriaceous space; head convex, declivous, short, with the antennary orbits exceedingly narrow, converging, and scarcely projecting beyond the point of insertion of the antennæ; the epistoma short, truncate in front, scarcely defined posteriorly; the eyes large, deeply emarginate, oblique if viewed from above; antennæ elongate, joints 1 and 2 very short, 3 much shorter than 4, 4–11 longer than broad; prothorax convex, transverse, finely margined at the sides, truncate at the base and apex, transversely sulcate behind; scutellum transverse, moderately large, rounded behind; elytra closely fitting to the prothorax at the base, elongate-oval or fusiform; epipleuræ entire, moderately broad at the base, and gradually narrowing to the apex; anterior coxæ strongly exserted, subcontiguous, the prosternum acutely raised between them behind and with a raised point at the apex; anterior coxal cavities closed behind; middle coxæ narrowly separated, with small trochantin; metasternum elongate; intercoxal process of the abdomen rather broad, subtriangular; third and fourth ventral segments with coriaceous hind margin; legs elongate, very slender; tarsi clothed with long, fine hairs beneath, the penultimate joint of all three pairs simple, narrow, the hind pair equalling the tibiæ in length, their first joint exceedingly elongate, as long as the other three joints united; tibial spurs distinct; body elongate, narrow, fusiform, winged.

This genus is proposed for three species from Central America, of which we have only received four specimens in all, and these females.

Mentes is perhaps best placed at the end of the Group Helopides, of which it may be considered a degraded form.

1. **Mentes ruficollis.** (Tab. XXIII. figg. 14, ♀; 14 *a*, maxilla and maxillary palpus.)

Elongate, fusiform, moderately convex, very opaque, black, the prothorax rufous. Head small, densely and rather coarsely punctured, shallowly, transversely grooved in front; eyes moderately large, but not prominent, rather finely granulated; antennæ black, elongate, joint 2 very short, 3 nearly twice as long as 2. very much shorter and narrower than 4, 4–11 moderately stout, longer than broad, subequal; prothorax transverse, much wider at the base than at the apex, the sides converging almost from the base, rounded anteriorly, the anterior angles declivous and very obtuse, the hind angles acute, the disc with a transverse groove behind limited on either side by a foveate depression, the entire surface thickly, finely punctate; elytra about four and a half times as long as the prothorax, widest at the middle, and narrowing thence to the apex, thickly, finely punctate, and with indistinct rows of closely placed punctures, the latter scarcely distinguishable from those of the interstices; beneath shining, piceous, the prothorax and gula rufo-testaceous, the flanks of the prothorax, the metasternal side-pieces, and the epipleuræ coarsely punctured, the rest of the metasternum and the venter very finely, sparsely punctate; legs piceous, the anterior femora at the base and the coxæ rufo-testaceous.

Length $3\frac{1}{2}$–$4\frac{1}{2}$ millim. (♀.)

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Two examples. The thorax and elytra, when viewed under the microscope, exhibit a very minute reticulate sculpture of the surface, and each puncture bears a short, minute, silvery hair. *M. ruficollis* differs from *M. fusiformis* and *M. setipennis* in its opaque upper surface and smaller and more finely granulated eyes, the thorax broader behind; it has a very different facies from either of them.

2. **Mentes fusiformis.** (Tab. XXIII. fig. 15, ♀.)

Very elongate, fusiform, rather depressed, brownish-piceous, shining, the elytra with a few (easily abraded) long, erect hairs towards the sides behind. Head coarsely, thickly punctate, smooth and slightly depressed in the middle between the eyes, the latter very large, coarsely granulated, and rather narrowly separated; antennæ moderately elongate, rather slender, pitchy-brown, joint 2 very short, 3 twice as long as 2, 4 fully one-half longer and a little wider than 3, 4–11 equal in length, considerably longer than broad; prothorax transverse, the sides slightly sinuate behind, parallel at the base, and rounded anteriorly, the hind angles sharply rectangular, the anterior angles declivous and very obtuse, the disc transversely depressed behind, the depression deeper in the centre and limited on either side by a deep fovea, the surface densely, coarsely punctate, more sparsely so on the middle of the disc; elytra about four and a half times as long as the prothorax, widest before the middle, and narrowing thence to the apex, sharply margined at the sides, finely punctate-striate, the striæ becoming deeper towards the apex and the punctures closely placed, the interstices flat on the disc, feebly convex towards the sides and apex, sparsely, very finely punctate; beneath obscure-castaneous, the flanks of the prothorax and the metasternal side-pieces coarsely punctate; legs pitchy-brown, the tarsi paler.

Length 6, breadth 2 millim. (♀.)

Hab. GUATEMALA, Dueñas (*Champion*).

One specimen.

3. **Mentes setipennis.**

Very elongate, fusiform, shining, pitchy-brown, the elytra pale castaneous, the latter with long, erect, scattered hairs, which are more distinct towards the sides and apex. Head very sparsely, finely punctate, smoother and rather convex between the eyes, the latter very large, coarsely granulated, and narrowly separated; antennæ elongate, rather stout, piceous, joints 1 and 2 rufous, 3 slender, nearly twice as long as 2, 4 much stouter than and about twice as long as 3, 4–11 slightly flattened, subequal, longer than broad; prothorax convex, not much broader than long, the sides parallel behind and rather obliquely converging in front, the hind angles rectangular, the anterior angles declivous and very obtuse, the disc transversely grooved behind, the groove limited on either side by a deep fovea, the surface rather sparsely, moderately coarsely punctate; elytra about four and a half times as long as the prothorax, widest before the middle, and narrowing thence to the apex, with rows of very fine, feebly impressed punctures which become indistinct towards the apex, the interstices flat throughout, each with an irregular row of very minute punctures; beneath obscure rufo-testaceous, very shining, the flanks of the prothorax, the metasternal side-pieces, and the epipleuræ at the base very coarsely punctate, for the rest almost smooth; legs pitchy-brown, the femora paler.

Length 6, breadth 2 millim. (♀.)

Hab. GUATEMALA, Coban (*Conradt*).

One specimen. Closely allied to *M. fusiformis*, but differing from it in the longer and stouter antennæ, the more convex, less transverse, and more finely and less densely punctured thorax, and in the smoother, non-striate elytra. The erect setæ on the elytra are easily abraded.

TALANUS (p. 321).

Dr. Horn has been kind enough to forward specimens of the North-American *T. langurinus* and *T. stenochinus* (Lec.) for comparison with the numerous Central-American species described in this work. *T. langurinus* is exceedingly close to the small, narrow variety of *T. lecontei*, but it has the sides of the thorax almost straight behind the middle—in *T. lecontei* they are always slightly sinuate (this is best seen when the thorax is viewed from the side, the marginal carina being much more sinuous towards the base); it is possible, however, that *T. langurinus* may vary in this respect. *T. stenochinus* resembles *T. subexaratus*, but has a very rugosely punctured head, with shallow frontal depression, the thorax and elytra more coarsely punctate, the thorax with very acute outwardly-directed hind angles.

Talanus neotropicalis (p. 322).

To the localities given, add:—Mexico, Cordova (*Sallé*), Guadalajara (*Flohr*).

The single (♀) specimen sent by Mr. Flohr differs from the others in having the thorax still more coarsely punctured, and the elytra distinctly striate at the apex; it is perhaps specifically distinct.

Talanus æneipennis (p. 327).

To the localities given, add:—Mexico, Teapa in Tabasco (*H. H. Smith*).

Five specimens. Apparently occurs in company with *T. lecontei* and *T. subexaratus*, both of which have been sent in plenty by Mr. Smith from the same locality.

PYANISIA (p. 329).

6. **Pyanisia lævis.**

Oblong-ovate, convex, dull black. Head densely, finely punctate; prothorax strongly, transversely convex, widest at the middle, the sides rounded, about equally converging in front and behind, and finely margined, the marginal carina very narrowly reflexed, the base broadly, feebly arcuate in the middle, very feebly sinuate towards the sides, the hind angles obtuse, the anterior angles declivous, rather sharp, the surface almost smooth (when viewed under a strong lens exceedingly minute, scattered punctures are visible); elytra convex, a little flattened on the disc, sometimes depressed along the suture (deeply so at the base in some specimens), almost smooth, or, at most, with very indistinct rows of shallow, minute, distantly placed punctures, the humeri angularly produced in front; beneath slightly shining, the ventral segments very finely, sparsely punctate; prosternum produced and declivous behind, the apex not raised.

Length 11–15 millim.

Hab. Mexico, Omilteme and Xucumanatlan in Guerrero 7000 to 8000 feet (*H. H. Smith*), Mochitlan in Guerrero (*Baron*).

Sent in abundance from, and apparently peculiar to, Western Mexico. *P. lævis* is a close ally of *P. opaca* (*coarctata*), which occurs at the same localities; but differs

from it in the strongly, transversely convex thorax (in this respect resembling *P. fumosa*), the sides of which are more feebly margined (the marginal carina being scarcely visible from above in some specimens), and in the rows of punctures on the elytra being almost or entirely obliterated.

PŒCILESTHUS (p. 335).

10. **Pœcilesthus cupripennis.** (Tab. XXIII. fig. 17.)

Moderately elongate, convex, shining; the head brilliant metallic green, the prothorax rufo-testaceous, the scutellum and elytra coppery-violaceous, the legs and under surface (the prothorax excepted) violaceous. Head smooth, very deeply longitudinally impressed between the eyes, and deeply, transversely grooved in front, the eyes large; antennæ pitchy-brown, violaceous at the base, rather elongate, joints 5–11 flattened, much longer than broad; prothorax transversely convex, short, finely and completely margined at the sides (the carina not visible from above), strongly so in front, a little narrower at the apex than at the base, and with a very deep transverse groove behind, the sides feebly rounded, the surface smooth; elytra rather elongate, convex, subparallel in their basal half, with rows of closely set, moderately fine punctures placed in shallow striæ, the striæ becoming a little deeper at the apex, the interstices flat, smooth.

Length 5, breadth 1½ millim. (♀.)

Hab. Panama, Bugaba (*Champion*).

One specimen. This little species is very dissimilar from any member of the genus known to me.

STRONGYLIUM (p. 341).

4 (a). **Strongylium clavicorne.** (Tab. XXIII. figg. 16; 16 *a*, antenna.)

Moderately elongate, narrow, convex, the head and prothorax greenish-æneous, the scutellum and elytra black, with a very faint violaceous lustre, the upper surface feebly shining. Head somewhat exserted, finely and rather sparsely punctured, very deeply, transversely depressed between the eyes, and transversely grooved in front, the eyes large; antennæ blackish-violaceous, with joints 4, 5, and 11 testaceous, short, only reaching to about the base of the prothorax, joints 3–5 very slender, 6 triangular, much wider than 5, 7–11 flattened, greatly widened, and closely articulated, forming an elongate, very broad club, 7–10 strongly transverse, 7 considerably narrower than 8, 11 much narrower and slightly longer than 10, rounded at the tip; prothorax about as long as broad, flattened-cylindrical, completely immarginate at the sides, very little narrower at the apex than at the base, widest at the middle, the basal and apical margins raised, the sides a little rounded at the middle, feebly sinuous in front and more distinctly so behind, the hind angles distinct, the disc with a shallow transverse depression on either side about the middle and with indications of a faint median groove at the base, the surface finely, sparsely, irregularly punctate; elytra convex, comparatively short, very much wider than the prothorax, widest beyond the middle, and gradually narrowing thence to the base, with regular rows of exceedingly minute, approximate punctures placed upon very fine almost obsolete striæ, the interstices perfectly flat throughout and apparently smooth (under a strong lens an exceedingly dense, minute, reticulate sculpture is visible, which gives the surface a dull appearance); beneath shining, violaceous, almost smooth; legs rather slender, violaceous, the tibiæ punctured, the femora smooth; epipleuræ exceedingly narrow from about their basal third onwards.

Length 6–6¼, breadth 2 millim. (♂ ♀.)

Hab. Mexico, Motzorongo and Atoyac in Vera Cruz (*Flohr*).

One pair, the male in a mutilated condition and without antennæ. This peculiar

little species differs from all the allied forms in the short, strongly clavate antennæ; nevertheless it is not advisable at present to separate it from *Strongylium*.

9 (A). **Strongylium conradti.**

Moderately elongate, convex, dark bronze, the elytra very shining, the head (except in front) and the prothorax duller. Head very densely, finely punctate, more sparsely so in front, feebly longitudinally depressed in the middle between the eyes, the latter very large and somewhat narrowly separated; antennæ black, slender, thickening outwardly, joints 8–10 shorter and wider than 7, 10 almost as broad as long; prothorax strongly transverse, immarginate at the sides, widest a little before the base, the sides thence to the apex gradually converging and feebly rounded, and armed about the middle with a short blunt tooth, the base shallowly grooved within, the groove terminating on either side in a rather deep depression, the hind angles distinct, the disc canaliculate and feebly transversely depressed on either side about the middle, the surface very densely, finely, confluently punctured; elytra comparatively broad, convex, parallel in their basal half, with irregular rows of coarse, deep, excavations, which are here and there longitudinally or transversely confluent, these excavations becoming shallower and smaller on the apical declivity, and with striæ of fine, approximate punctures at the bottom, the interstices smooth; beneath shining, the flanks of the prothorax and the sides of the metasternum rather coarsely and closely, the ventral segments more finely, punctured; legs slender, æneous.

Length 10, breadth 4 millim.

Hab. GUATEMALA, Coban (*Conradt*).

One specimen, apparently a male. Allied to *S. canaliculatum*, but with larger eyes and more slender limbs, the head and thorax more finely and more densely punctured, the elytral excavations not so coarse, becoming shallower at the apex. The thorax is very densely, rugosely punctured.

Specimens of *S. excavatum*, Mäkl., were also sent from Coban by Mr. Conradt.

LOBOPODA (p. 387).

In most of the hairy species of this genus the punctures of the elytral interstices are muricate, that is to say, they are each preceded by a minute raised point (the puncture itself being very shallow in some of the species); viewed under a low-power these points are scarcely visible.

This character was not noticed in my descriptions.

6 (A). **Lobopoda calcarata.** (Tab. XXIII. figg. 23, ♂; 23 *a*, œdeagus.)

Very elongate, pitchy-brown, shining, sparsely pubescent. Head very finely, sparsely punctate, the eyes very large and approximate in the male, smaller and very narrowly separated in the female; antennæ ferruginous, slender; prothorax moderately convex, gradually narrowing from the base, the sides rounded in front, the disc obsoletely canaliculate in the middle, the basal foveæ deep, the surface very finely, sparsely punctate; elytra very elongate, subparallel towards the base, gradually narrowing behind, deeply punctate-striate, the punctures approximate, but not coarse, the interstices flat on the disc, moderately convex towards the sides and apex, rather sparsely, very finely punctate, the apices rounded; beneath ferruginous, sparsely, finely punctate, the sides of the metasternum coarsely so; legs ferruginous or obscure ferruginous, very elongate.

♂. Anterior tibiæ strongly and angularly dilated on the inner side before the middle. The lateral lobes of the last ventral segment long, spoon-shaped, and curved inwards, armed on the upper edge near the base

with a sharp triangular tooth, the lower edge feebly serrate; the central sheath rather broad, blunt at the tip.

Length $13\frac{1}{2}$–$14\frac{1}{2}$, breadth $4\frac{1}{4}$–$4\frac{1}{3}$ millim. (♂ ♀.)

Hab. MEXICO, Juquila (*Flohr*).

One pair. Allied to *L. mexicana*, but larger and much more elongate; the anterior tibiæ angularly dilated within, and the lateral lobes of the last ventral segment very differently shaped, in the male.

In the form of the œdeagus, *L. calcarata* approaches *L. panamensis*.

Lobopoda convexicollis (p. 395).

To the localities given, add:—GUATEMALA, Coban (*Conradt*).

20 (A). Lobopoda teapensis. (Tab. XXIII. fig. 24, œdeagus.)

Moderately elongate, fusiform, pitchy-brown, thickly and coarsely pubescent. Head finely and rather sparsely punctured, more closely so in front, the eyes very large and approximate; antennæ ferruginous, moderately slender, not reaching to the middle of the elytra; prothorax convex, narrowing almost from the base, the sides rounded anteriorly, the hind angles subrectangular, the disc shallowly but distinctly canaliculate, the basal foveæ rather deep, the surface closely, finely punctate, sparsely so on the middle of the disc; elytra moderately long, rapidly narrowing from a little below the base, and rounded at the apex, deeply and coarsely punctate-striate, the punctures closely placed, the interstices strongly convex towards the sides and apex, flatter on the basal portion of the disc, muricately punctured; legs ferruginous, rather stout.

♂. Anterior tibiæ slightly sinuous within. The lateral lobes of the last ventral segment moderately long, somewhat spoon-shaped, abruptly bent inwards at the apex; the central sheath gradually narrowing to the tip.

Length $8\frac{1}{2}$, breadth $3\frac{1}{4}$ millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

One specimen. Closely allied to *L. chontalensis*, but smaller and less elongate; the thorax more parallel at the sides behind (the hind angles in consequence less prominent), more finely and more sparsely punctured, and with a distinct, shallow median groove; the elytral interstices more convex. Compared with *L. simplex*, the elytra are much more rapidly narrowed behind, and the œdeagus is very differently formed.

Lobopoda opaca (p. 400).

A single (♂) specimen from Coban, Guatemala (*Conradt*), is perhaps referable to this species; it differs from the Panama type (♂) in having the upper surface less opaque, and in the elytral interstices being less distinctly punctured. The œdeagus is similarly formed.

Lobopoda jalapensis (p. 402).

To the Mexican localities given, add:—Tampico (*Flohr*).

Lobopoda foveata (p. 405).

To the Panama localities given, add:—Matachin (*O. Schunke*).

Numerous examples, forwarded to us by M. René Oberthür.

Lobopoda pilosa (p. 405).

To the localities given, add:—GUATEMALA, Coban (*Conradt*).

We have now received a male example of this insect, the characters of which are as follows:—

♂. Eyes very large and approximate; anterior tibiæ slightly sinuous within; the lateral lobes of the last ventral segment spoon-shaped, their apices somewhat truncate and furnished with a few very short hairs; the central sheath narrow.

The lateral lobes of the last ventral segment are broader, less narrowed outwardly, and more obtuse at the tip than in the allied *L. foveata*.

ALETHIA (p. 417).

2 (A). **Alethia nitidipennis.**

♂. Elongate, narrow, parallel, pitchy-brown, thickly clothed with long, decumbent hairs, the head and prothorax dull, the elytra shining. Head very densely, finely, confluently punctured, the eyes large, narrowly separated; antennæ ferruginous, slender, filiform, extending to beyond the middle of the elytra; prothorax strongly transverse, slightly flattened on the disc, the sides gradually converging from the base and feebly rounded anteriorly, the disc obsoletely depressed in the middle at the base, the surface very densely, finely, confluently punctured; elytra very elongate, much broader than the prothorax, parallel for two-thirds of their length, finely and lightly punctate-striate, the striæ becoming a little deeper at the apex and the punctures closely placed, the interstices thickly and more finely punctate, flat, feebly convex at the apex; legs very long and slender, pitchy-brown, the tarsi rufo-testaceous.

Length 8, breadth 2½ millim.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Two examples, both males. Closely allied to *A. longipennis* and *A. subnitida*; differing from the former in the much longer pubescence, larger and more widely separated eyes, more transverse thorax, and relatively shorter, distinctly punctate-striate elytra, and from the latter in the very densely scabrous-punctate thorax and the more finely punctured elytra.

CHARISIUS (p. 421).

1 (A). **Charisius picturatus.** (Tab. XXIII. fig. 21, ♂.)

Elongate, shining, bright rufo-testaceous; the elytra each with a short oblique stripe below the shoulder, a strongly angulated postmedian fascia (which is interrupted in one specimen), and a short, angulated fascia or crescentiform mark before the apex, neither of which reach the suture, yellow, these markings edged on all sides with black and dentate in front and behind. Head finely and somewhat thickly punctured; antennæ rufo-testaceous, filiform, not reaching to the middle of the elytra; prothorax transverse, the sides parallel behind, rounded and converging in front, the transverse basal groove very deep and extending outwards to the deep basal foveæ, the disc distinctly canaliculate, the surface very

finely, sparsely punctate; elytra elongate, parallel in their basal half in the male, slightly widened at the middle in the female, finely and rather deeply punctate-striate, the interstices smooth, feebly convex throughout; beneath ferruginous, shining, the metasternum sparsely and somewhat coarsely punctured, the punctures becoming very coarse towards the sides and extending on to the adjacent portion of the epipleuræ, the ventral surface almost smooth; legs very elongate, rufo-testaceous.

♂. Anterior tibiæ triangularly dilated on the inner side about the middle; the fifth ventral segment broadly and shallowly depressed along the centre.

Length 10½–11, breadth 3¼–3½ millim. (♂ ♀.)

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

One pair. Closely allied to the Guatemalan *C. fasciatus*; but differing from all the varieties of that insect in having the anterior spot on the elytra oblique, and placed at the side, instead of on the middle of the disc. The elytral interstices are slightly convex throughout, the metasternum is more distinctly punctured, and the anterior tibiæ in the male are more angularly dilated within. The elytral markings are very sharply defined.

HYMENORUS (p. 424).

Hymenorus laticollis (p. 429).

To the locality Mexico, add:—Chilpancingo and Omilteme in Guerrero (*H. H. Smith*), Mexico city (*Flohr*).

Hymenorus badius (p. 433).

A single specimen (♀), from Canelas in Durango (*Flohr*), perhaps belongs to this species; it differs from the type in being very much larger and broader.

Hymenorus longicollis (p. 434).

To the Mexican locality given, add:—Bobo (*Flohr*).

Hymenorus igualensis (p. 434).

To the Mexican locality given, add:—Chilpancingo (*H. H. Smith*), Guadalajara (*Flohr*).

Hymenorus angustatus (p. 436).

To the locality given, add:—Mexico, near the city (*Flohr*).

ÆANES. (To follow the genus *Hymenorus*, p. 441.)

Last joint of the maxillary palpi triangular, stout, its apical and outer sides about equal in length and each longer than the inner side, the latter rounded; last joint of the labial palpi stout, truncate at the tip; antennæ filiform, rather stout, about reaching to the basal third of the elytra, joint 2 very short, 3 about one-third longer than 4, 4–11 almost equal in length and breadth, longer than broad; head comparatively large; eyes exceedingly large, oblique (if viewed from above), coarsely granulated, subapproximate, deeply emarginate; prothorax subcylindrical, longer than broad, only a little wider than the head, truncate in

front, deeply bisinuate at the base, the marginal carina not visible from above, the base finely margined; scutellum strongly transverse; elytra oblong-oval, much wider than the prothorax, very feebly margined at the sides (the margin not visible from above); legs rather short, moderately stout; anterior and intermediate tarsi with the third and fourth joints, and the hind tarsi with the penultimate joint, lobed beneath; the basal joint of the hind tarsi very elongate, much longer than the other joints united; claws pectinate; prosternum abruptly declivous behind; intercoxal process of the abdomen narrow; epipleuræ extending narrowly to the apex; body elongate, narrow, obovate, densely pubescent, winged.

This genus is proposed for a remarkable Cistelid from Western Mexico. It is allied to *Hymenorus*, but differs from it in having the thorax elongate, subcylindrical, and narrow, much narrower than the elytra and very little wider than the head. The single specimen received is, no doubt, of the male sex, the eyes being exceedingly large. In the form of the thorax it approaches *Hymenorus longicollis*.

1. Æanes angusticollis. (Tab. XXIII. fig. 20.)

Moderately convex, pitchy-brown, feebly shining, thickly clothed with coarse, decumbent hairs. Head closely punctured in front, sparsely so behind, the middle of the vertex smooth, the eyes black, narrowly separated, the palpi rufo-testaceous; antennæ ferruginous; prothorax distinctly longer than broad, parallel for three-fourths of its length, the sides feebly rounded in front, the hind angles subrectangular, the entire surface very densely, finely punctate; elytra oblong-oval, barely three times as long as, and much broader than, the prothorax, widest about the middle, punctate-striate, the punctures very closely placed, shallow, and rather coarse, the interstices almost flat, very thickly punctured, densely so towards the base; beneath shining, thickly, rather coarsely punctate, the punctures on the venter finer; legs ferruginous, the femora slightly infuscate, the tarsi paler.

Length $6\frac{1}{4}$, breadth $2\frac{1}{4}$ millim.

Hab. Mexico, Acapulco (*Flohr*).

One specimen.

AMAROPSIS. (To follow the genus *Pitholaus*, p. 446.)

♀. Last joint of the maxillary palpi elongate-triangular, its apical and outer sides about equal in length, each very much longer than the inner side; head small; eyes comparatively small, rounded (if viewed from above), very widely separated, feebly emarginate, and rather finely granulated; antennæ elongate, exceedingly slender, joint 1 stout, 2 very short, 3 considerably shorter than 4, 4–11 elongate, gradually increasing in length, and a little dilated on the inner side towards the tip; prothorax transverse, nearly twice as wide as the head, parallel at the sides behind, moderately convex, finely margined (the carina visible from above), truncate in front, bisinuate at the base, and with distinct basal foveæ; scutellum transversely triangular; elytra rather depressed, much wider than, and about three and a half times as long as, the prothorax, subparallel in their basal half, with the humeri rounded; legs moderately long, very slender; anterior and intermediate tarsi with the third and fourth joints, and the hind tarsi with the penultimate joint, lobed beneath; the basal joint of the hind tarsi longer than the other joints united; claws pectinate; prosternum abruptly declivous behind; intercoxal process of the abdomen narrow, triangular; epipleuræ extending narrowly to the apex; body oblong-oval, rather depressed, glabrous, metallic, winged.

The single species for which this genus is proposed has the facies of a small *Amara*. It approaches the European *Gonodera*, Muls., from which it may be known by the lobed penultimate joint of the tarsi, the relatively longer basal joint of the hind tarsi, the very slender limbs, &c.

1. **Amaropsis annulicornis.** (Tab. XXIII. fig. 18, ♀.)

♀. Æneous, very shining, the head in front, the oral organs, and legs ferruginous. Head closely, finely punctate, shallowly, transversely grooved in front; antennæ with joints 1 and 2 entirely and the tip of each of the following ones rufo-testaceous, for the rest piceous; prothorax transverse, very much wider at the base than at the apex, the sides rounded and rapidly converging from the middle, parallel behind, the hind angles subrectangular, the basal foveæ oblique, distinct, the surface sparsely, finely punctate; elytra with regular rows of very fine, oblong, approximate punctures placed upon almost obsolete striæ, the punctures becoming a little coarser towards the base and still finer towards the apex, the interstices perfectly flat throughout, each with a single row of exceedingly minute, distantly placed punctures (only visible under a strong lens); beneath very shining, sparsely, finely punctate, the venter very finely so.

Length 5, breadth $2\frac{1}{4}$ millim.

Hab. Mexico, Misantla (*Flohr*).

One example.

PHEDIUS (p. 447).

Some of the species of *Phedius* (*P. cylindricollis* &c.) have rudimentary wings, but they are not easily seen unless the elytra are removed. In my definition of the genus the body is stated to be apterous. The mandibles in *P. lapidicola* are deeply cleft, the upper tooth longer than the lower one. All the species appear to be rare, very few examples of any of them having been received as yet. According to Mr. Flohr, they are found beneath stones.

1 (a). **Phedius lapidicola.**

Oblong-obovate, convex, pitchy-brown, the elytra shining, the head and prothorax duller, the entire upper surface thickly clothed with long erect hairs. Head densely, somewhat coarsely punctured, very deeply transversely grooved in front; mandibles deeply cleft; antennæ ferruginous, very stout, filiform, nearly reaching to the middle of the elytra, joint 3 considerably longer than 4; prothorax scarcely wider at the base than at the apex, very convex, transverse, widest at one-third from the apex, the sides strongly rounded anteriorly and gradually converging behind, the base truncate, the hind angles obtusely rectangular, the entire surface very densely, somewhat coarsely punctured; elytra oblong-oval, much wider than the prothorax, widest beyond the middle, with rows of moderately fine, subapproximate punctures placed upon almost obsolete striæ, the interstices flat, thickly, confusedly punctured, the punctures of the striæ not coarser than (and scarcely distinguishable from) those of the interstices and becoming finer at the apex; beneath ferruginous, shining, thickly and rather coarsely punctured, clothed with long, decumbent hairs; legs very stout, obscure ferruginous; body apparently apterous.

Length $8\frac{1}{2}$, breadth $3\frac{2}{3}$ millim.

Hab. Mexico, Sierra above Cuernavaca (*Flohr*).

One specimen. Allied to *P. chevrolati* (of which additional Mexican specimens have been received from Mr. Flohr), but with the head and thorax less rugose, the elytra shining and sculptured as in *P. cylindricollis* and *P. obovatus*.

1 (b). **Phedius hirtus.** (Tab. XXIII. fig. 26, ♀.)

Obovate, rather broad, convex, piceous, the elytra shining, the head and prothorax duller, the entire upper surface thickly clothed with long, semierect hairs. Head very densely, finely punctate, deeply transversely grooved in front; mandibles feebly cleft; antennæ fusco-ferruginous, filiform, slender, reaching to about

the middle of the elytra, joint 3 much longer than 4; prothorax convex, strongly transverse, wider at the base than at the apex, the sides almost parallel from the middle to the base, rounded in front, the base very feebly sinuate on either side, the hind angles obtuse, the surface very densely, finely punctate; elytra comparatively short, much wider than the prothorax, rapidly widening to a little beyond the middle and abruptly narrowed behind, faintly striate at the apex only, the entire surface confusedly, thickly, finely punctate (in certain positions the usual rows can be distinguished, though the punctures of the interstices are not finer than those of the series); beneath rather dull, coarsely pubescent, coarsely and closely, the ventral surface more finely, punctate; legs comparatively slender, pitchy-brown, the tarsi rufo-testaceous; body apparently apterous.

Length 7–7½, breadth 3½–3¾ millim. (♀.)

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Three examples, all females. Allied to *P. chevrolati* and *P. lapidicola*; but less elongate, the antennæ slender, the thorax more transverse and more finely punctured, the elytra shorter, more finely and more confusedly punctured, the pubescence a little shorter and less erect, the legs not nearly so stout. Compared with the other species of the genus, *P. hirtus* is less elongate and has more slender antennæ.

CISTELA (p. 451).

9 (A). **Cistela ovipennis.** (Tab. XXIII. fig. 19, ♂.)

♂. Ovate, pitchy-brown, the head paler, the upper surface dull, finely pubescent. Head closely, finely punctate, the eyes moderately large, rather widely separated; antennæ piceous or pitchy-brown, rufo-testaceous at the base, extending to far beyond the middle of the elytra, joints 2 and 3 very short, subequal in length, 4–11 rather broadly flattened and serrate, much longer than broad; prothorax transverse, moderately convex, the sides rapidly converging from about the basal third, parallel behind, the hind angles obtusely rectangular, the base bisinuate, the surface very densely, finely, shallowly punctured; elytra ovate, moderately long, widest before the middle, finely and rather deeply punctate-striate, the punctures very closely placed, the interstices almost flat, thickly, minutely punctate; legs rufo-testaceous, the femora and tibiæ sometimes darker; anterior and intermediate tarsi slightly dilated, the first joint of the anterior pair rather broadly so.

Length 5, breadth 2⅛ millim.

Hab. MEXICO, Dos Arroyos in Guerrero 1000 feet (*H. H. Smith*).

Two examples, both males. This small *Cistela* is of a more regularly ovate shape than any of the other Mexican species here described.

ISOMIRA (p. 457).

Isomira subænea (p. 458).

The locality for this species is incorrectly given as "MEXICO": it should be "GUATEMALA."

Isomira —— ? (p. 459).

A second specimen has been received of this insect, from Chilpancingo, which is perhaps only a large form of *I. brevicollis*, described from a single example.

XYSTROPUS (p. 464).

1. **Xystropus californicus.**

Prostenus californicus, Horn, Trans. Am. Ent. Soc. ii. p. 138 (1868) [1].
Xystropus californicus, Casey, Ann. New York Acad. vi. p. 74.
Xystropus fulgidus (Mäkl.), huj. op. p. 464, Tab. XXI. fig. 10.

To the localities given, add :—North America, Martinez in California [1].

As Dr. Horn remarks [1], it is probable that this insect may have been imported into California. We have not seen it from north of the Isthmus of Tehuantepec.

CTEISA (p. 465).

Cteisa pedinoides (p. 465).

To the localities given, add :—Mexico, Misantla (*Flohr*), Vera Cruz (*Höge*).

Two specimens, differing from those from the State of Panama in having the thorax slightly rounded at the sides behind, with more obtuse hind angles.

HYPORHAGUS (p. 472).

Hyporhagus lævepunctatus (p. 474).

To the localities given, add :—Guatemala, Paraiso (*Champion*); Panama, Matachin (*O. Schunke*).

I am indebted to M. René Oberthür for the loan of the types of *H. lævepunctatus*, *H. lecontei*, and *H. fusciceps*. Our insect agrees perfectly with *H. lævepunctatus* (=*lecontei*). *H. fusciceps* has a more coarsely punctured thorax, and the punctures of the elytral series also coarser.

5 (a). **Hyporhagus nitidus.**

Broad, ovate, moderately convex, very shining, black, the anterior margin of the prothorax obscure ferruginous; the antennæ pitchy-brown, the legs piceous. Head densely, somewhat coarsely punctate; antennæ with a moderately large, 3-jointed club; prothorax transverse, rapidly narrowing from the base, the sides feebly rounded anteriorly and sharply margined, the surface minutely, rather closely punctate, the punctures still more minute on the middle of the disc, the disc with a smooth narrow median space behind; elytra narrowing from a little below the base, strongly flexuous at the sides before the middle, broadly and very sharply margined, with rows of very fine, rather closely placed punctures, which in the three rows next the suture at the base are replaced by very shallow, more distant, coarser impressions, the interstices perfectly flat, each with two or three irregular rows of very minute punctures; beneath black, the ventral surface closely, finely punctate, the metasternum with more minute, scattered punctures, the sides of the latter and of the first ventral segment obliquely and rather coarsely strigose; mesosternal carina feebly arcuate in the middle; anterior tibiæ broadly concave along their upper face.

Length 6¾, breadth 4 millim.

Hab. Nicaragua, Chontales (*Belt*).

One specimen. Much larger, broader, and more shining than *H. lævepunctatus*; the elytra more strongly flexuous at the sides, narrowing from a little below the base, and with very prominent, reflexed, marginal carina; the legs and antennæ much darker in colour. It is nearly allied to *H. steinheili*, Oberth., from Colombia.

9. **Hyporhagus suturalis.** (Tab. XXIII. fig. 22.)

Elliptic, convex, very shining; rufous, the head, the mandibles at the tip, the elytra with a broad sutural stripe and a common transverse basal patch, and sometimes the prothorax in the middle at the base, more or less piceous, the anterior margin of the prothorax yellowish; the antennæ rufous, the club sometimes paler; the legs and under surface rufo-testaceous. Head densely, rather coarsely punctate; antennæ with a broad, 3-jointed club; prothorax transverse, rapidly narrowing from the base, the sides sharply margined and very feebly rounded, the surface sparsely, minutely punctate, the punctures almost obliterated towards the sides; elytra somewhat gibbous, declivous from about the basal third, feebly margined and moderately flexuous at the sides, the latter slightly rounded, with rows of exceedingly minute punctures, which are completely obliterated on the disc before the middle, become distinctly coarser towards the suture behind, and at the base are replaced by coarse shallow impressions, the interstices smooth and perfectly flat throughout; beneath almost smooth; mesosternal carina broadly, feebly arcuate in the middle; anterior tibiæ not grooved along their upper face.

Length $4\frac{1}{4}$–$5\frac{1}{2}$, breadth $2\frac{1}{2}$–$3\frac{1}{4}$ millim.

Hab. Panama, Bugaba (*Champion*).

Numerous examples. Allied to *H. clavicornis*, Oberth., from Ega, but very much larger than that insect, and also differing from it in various details.

10. **Hyporhagus ferrugineus.** (Tab. XXIII. fig. 25.)

Elliptic, convex, rather narrow, shining, ferruginous, the prothorax of a yellower and more dilute colour; the antennæ ferruginous, the legs and under surface rufo-testaceous. Head very densely, finely punctate; antennæ with a stout, 3-jointed club; prothorax rather elongate, not much broader than long, rapidly and obliquely narrowing from the base, the sides finely margined, the surface very finely, somewhat thickly punctate, the disc with a smooth narrow median space; elytra a little rounded at the sides, the latter very finely margined and feebly flexuous, with rows of fine, distinct punctures, these punctures being obliterated on the disc before the middle, becoming evanescent towards the suture and apex, and replaced at the base by coarse, shallow impressions, the interstices smooth and perfectly flat; beneath almost smooth; the mesosternal carina feebly arcuate at the middle; tibiæ rather narrow, the anterior pair not grooved along their upper face.

Length $2\frac{3}{4}$–$3\frac{1}{2}$, breadth $1\frac{1}{2}$–$1\frac{3}{4}$ millim.

Hab. Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Numerous examples. A very small, narrow species, the elytra entirely ferruginous, the thorax yellowish, the upper surface very shining, the legs rather slender.

H. ferrugineus is of about the same length as *H. clavicornis*, but it is narrower than that insect.

ASPATHINES (p. 475).

Hyporhagus æneus, Thoms., from San Domingo, the type of which has been kindly communicated by M. René Oberthür, belongs to this genus, and it only differs from

A. ovatus in having the thorax more closely punctured, with the lateral margins less reflexed and not depressed within. It seems incredible that Thomson could have described his insect without noticing the form of the antennæ.

CENTRIOPTERA (pp. 74, 508).

3. **Centrioptera infausta.**

Asbolus (?) *infaustus,* Lec. Proc. Acad. Phil. vii. p. 84[1].
Oochila infausta, Lec. List Col. N. Am. p. 59 (1863)[2].
Centrioptera infausta, Horn, Rev. Ten. of Am. north of Mexico, p. 280[3].
Centrioptera spiculosa, huj. op. p. 508.

To the localities given, add:—North America, Texas[1 3].

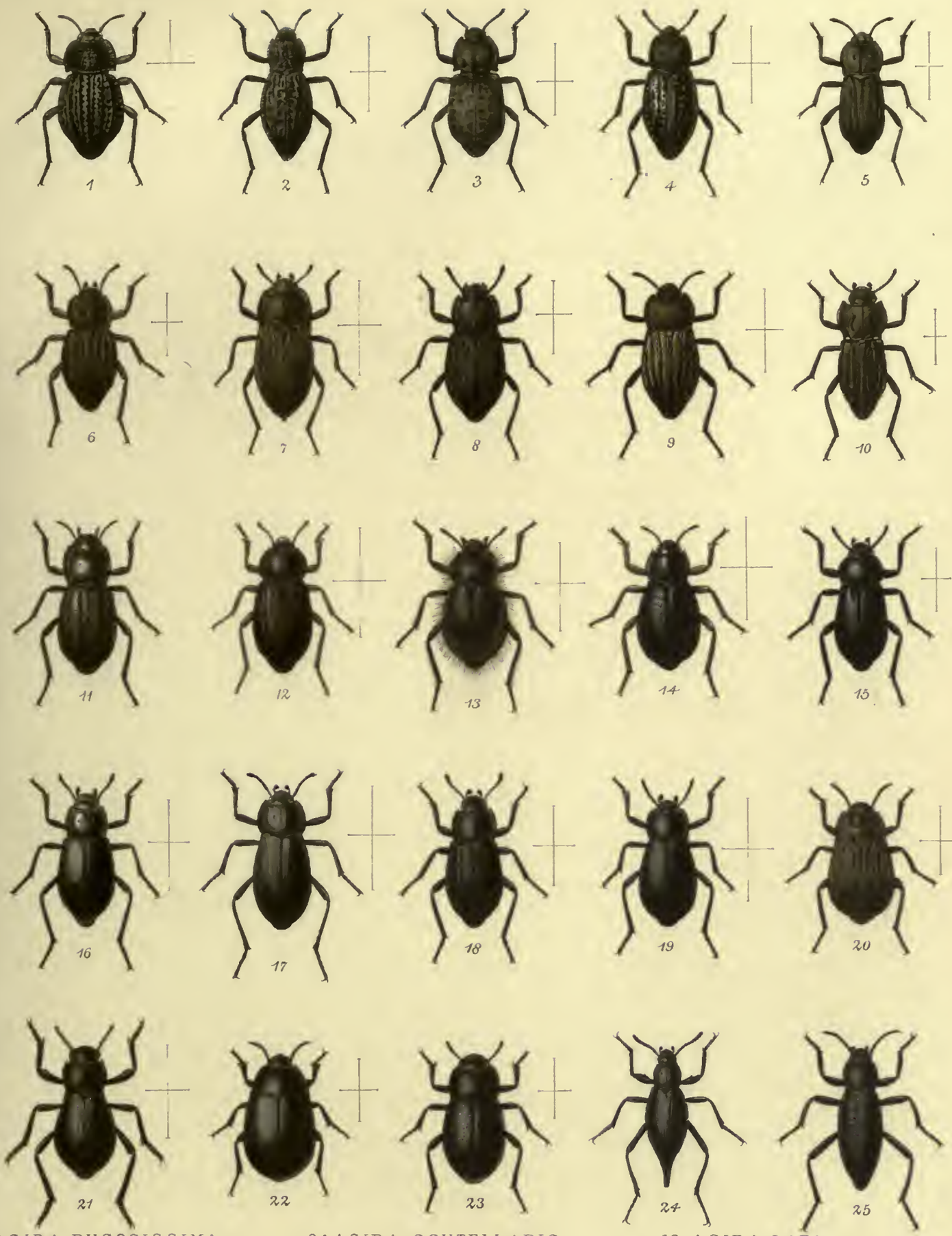
The above synonymy is given on Dr. Horn's authority.

1 TRIENTOMA RUGIFRONS
2 POSIDES DISSIDENS.
3 MESABATES LATIFRONS.
4 MENCHERES ELONGATUS.
5 SŒMIAS MINUTA.
6 PESCENNIUS VILLOSUS.
7 EURYMETOPON BREVICOLLE.
8 EMMENASTUS GLABRATUS.
9 EMMENASTUS CHIRIQUENSIS.
10 " CANALICULATUS.
11 " FOVEICOLLIS.
12 TYDEOLUS ATRATUS.
13 " SINGULARIS.
14 SCHŒNICUS OCULATUS.
15 " PANAMENSIS.
16 " CHALYBEUS.
17 SCHŒNICUS PECTORALIS.
18 EPITRAGUS NIGRICANS.
19 " AURULENTUS.
20 " ORNATUS. ♀
21♀, 22♂ " BICARINATUS.
23 " PLICATUS.
24 " CUPREUS.
25 " GODMANI.

W Purkiss lith. Hanhart imp.
368.

1 ZOPHERUS COSTARICENSIS.
2 " JANSONI.
3 " TUBERCULATUS.
4 " COMPACTUS.
5 " HALDEMANNI *Var.* VERRUCOSUS.
6 " ANGULICOLLIS.
7 NOSODERMA VENUSTUM.
8 " LUTOSUM.
9 NOSODERMA ASPERATUM.
10 " ZUNILENSE.
11 " GUATEMALENSE.
12 " SPARSUM.
13 " INSIGNE.
14 " ÆQUALE.
15 TISAMENES TRUQUII.
16 OLOGLYPTUS PLANATUS.
17 UCALEGON PULCHELLUS.
18 OLOGLYPTUS BICARINATUS.
19 " SINUATICOLLIS.
20 ASTROTUS SETICORNIS.
21 " LIMOSUS.
22 " DEBILIS.
23 SICHARBAS LOBATUS.
24 ZAMOLXIS DILATATUS
25 POLIORCETES PLATESTHOIDES.

W. Purkiss lith. Hanhart imp.



1 ASIDA RUGOSISSIMA.
2 „ CLATHRATA.
3 „ FORRERI.
4 „ SUTURALIS.
5♂ „ LONGIPENNIS.
6 „ INDUTA.
7 „ LATICOLLIS.
8 „ FALLAX.
9♂ ASIDA SCUTELLARIS.
10♂ „ DISSIMILIS.
11 „ DIFFICILIS.
12 „ PALMERI.
13 „ VILLOSA.
14 „ RUFIPES.
15 „ SPHÆRICOLLIS.
16 „ MARGINICOLLIS.
17 „ UMBROSA.
18 ASIDA LATA.
19 „ BLANDA.
20 BRANCHUS OBSCURUS.
21 CRYPTOGLOSSA MEXICANA.
22 EUSATTUS NITIDIPENNIS.
23♀ OXINTHAS PRAOCIOIDES.
24♂ ELÆODES ESCHSCHOLTZI
25 „ RUIDA.

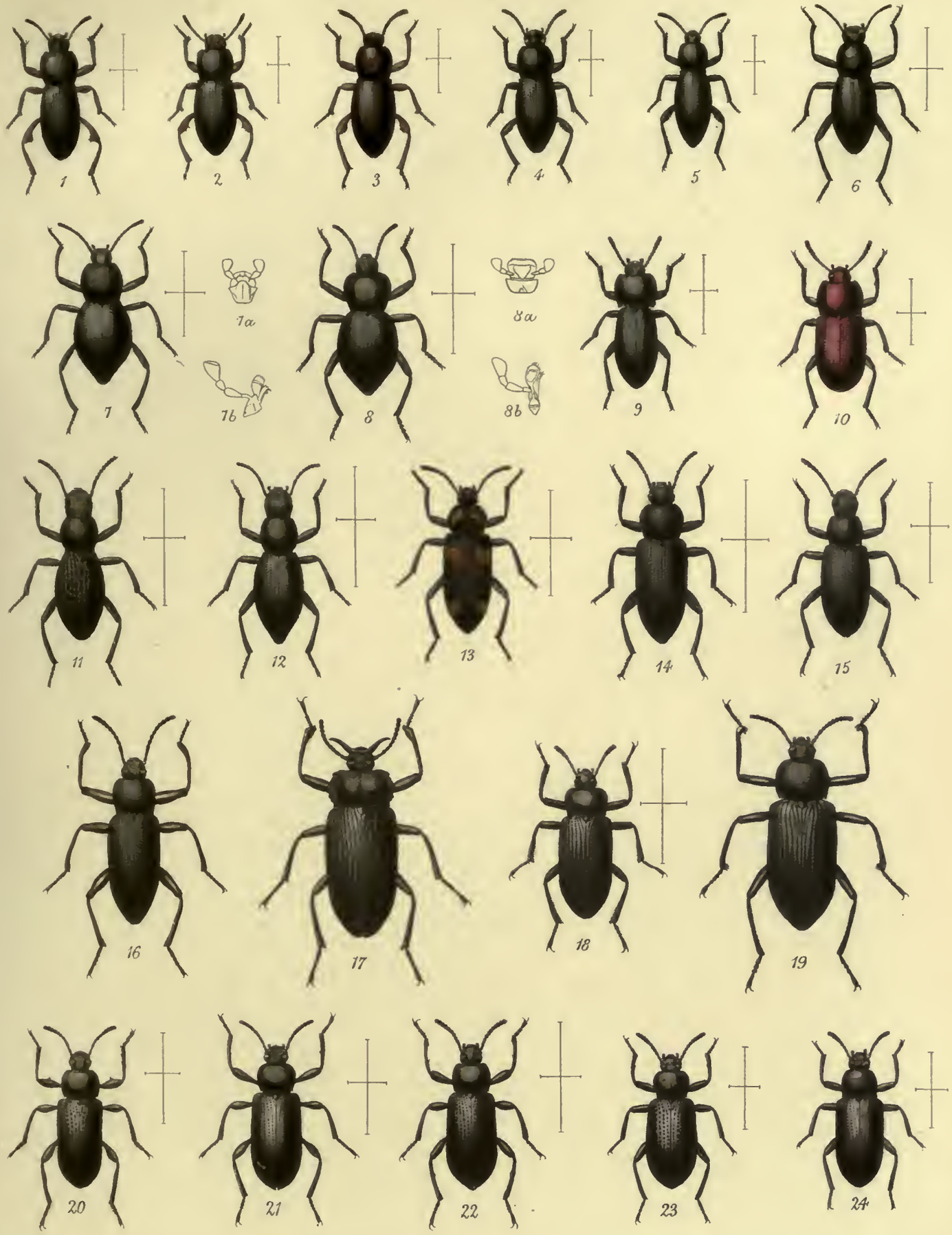
W. Purkiss lith.

Hanhart imp.
379.

1	EUSATTUS	DEPRESSUS.	11 ♂	ELÆODES	PONDEROSA.	18 ♂	ELÆODES	FORRERI.
2♂	ELÆODES	SPINIPES.	12 ♂	"	ANGUSTA.	19 ♂	"	LÆVIGATA.
3♀	"	EXARATA.	13 ♂	"	SONORÆ.	20♂	"	SOLIERI.
4♂5♀	"	MAURA.	14 ♂	"	CHIHUAHUENSIS.	21 ♂	"	SALLÆI.
6♂7♀	"	ROTUNDICOLLIS.	15 ♂	"	CALCARATA:	22 ♂	"	IMPOLITA
8♂	"	CURTA.	16 ♂	"	ERRATICA.	23 ♂	"	HÖGEI.
9	"	SULCATULA.	17 ♂	"	LONGICORNIS.	24 ♂	"	SULCATA.
10♀	"	DILATICOLLIS.				25 ♂	"	GORYI

W Purkiss lith.

Hanhart imp.
385.



1 ♂ ARGOPORIS BICOLOR.
2 ♂ " RUFIPES.
3 ♂ " CRASSICORNIS.
4 ♂ " ATRIPES.
5 ♂ " CAVIFRONS.
6 MITYS LÆVIS.
7.7a.b. " INFLATUS.
8.8a.b. ŒNOPION GIBBOSUS.
9 ♂ CENTRONOPUS SUPPRESSUS.
10 ♂ PYRES METALLICUS.
11 ♂ RHINANDRUS FOVEOLATUS.
12 ♂ " HELOPIOIDES.
13 ♀ ZOPHOBAS SIGNATUS.
14 ♂ " LATICOLLIS.
15 ♂ RHINANDRUS OBSOLETUS.
16 ♂ ZOPHOBAS PEDESTRIS.
17 ♂ TAUROCERAS ANGULATUM.
18 ŒATUS CHEVROLATI.
19 ♂ NYCTOBATES PROCERUS.
20 ♂ NUPTIS CALIGINOSUS.
21 ♂ " INQUINATUS.
22 ♂ " VALIDUS.
23 ♂ " TENEBROSUS.
24 GLYPTOTUS NITIDUS.

W Purkiss lith. Hanhart imp. 378*

1♀ STHENOBŒA APICALIS.
2 ISICERDES OCCULTUS.
3 ILUS APICICORNIS.
4 CHOASPES PURPUREUS.
5 " ANGULICOLLIS
6 HESIODUS DEBILIS.
7♂ " LONGITARSIS.
8 HICETAON FRONTALIS.
9 RHACIUS SULCATULUS.
10 " QUADRICOLLIS.
11 NOTIBIUS AFFINIS.
12 CONIBIUS BRUNNIPES.
13 ULUS HIRSUTUS.
14 " LINEATULUS.
15♂ BLAPSTINUS NITIDUS.
16♂ " INTERSTITIALIS.
17♂ " BUQUETI.
18♂ BLAPSTINUS GRANDIS.
19♂ " TIBIALIS.
20 " ATRATUS.
21 " SULCIPENNIS.
22 " EMMENASTOIDES.
23♂ PENICHRUS BLAPSTINOIDES.
24 CNEMEPLATIA LATICOLLIS
25♂ TRICHOTON CURVIPES.

W Purkiss lith.

Hanhart imp.

1 CRYPTICUS MACULATUS.
2 DAOCHUS MANDIBULARIS.
3 PENETA PANAMENSIS.
4 CLEOLAUS SOMMERI.
5 TELCHIS CLAVICORNIS.
6 ARRHABÆUS CONVEXUS.
7♂ ECHOCERUS ANALIS.
8♂ ICCIUS CEPHALOTES.
9♂ ICCIUS CYLINDRICUS.
10♂ SICINUS GUATEMALENSIS.
11♂ ALEGORIA SALLÆI.
12♂ PHERES BATESI.
13♂ ULEDA GROSSA.
14♂ ULOMA MEXICANA.
15♂ „ RETUSA, *var.* DIMIDIATA.
16♂ „ ARMATA.
17♂ „ SPINIPES.
18♂ ULOMA DIVERGENS.
19♂ ULOSONIA DEJEANI.
20 METULOSONIA REFLEXA.
21 PHAYLLUS MINUTUS.
22♂ SITOPHAGUS DILATIFRONS
23♂ ÆSYMNUS NITIDUS.
24♂ DOLIEMA FRONTALIS.
25♂ „ ANGUSTATA.

W. Purkiss lith.

Hanhart imp.
420.

1♂ SITOPHAGUS FULIGINOSUS.
2 " CYNÆOIDES
3 MOPHIS MARGINICOLLIS.
4♂ CORTICEUS RUFIPES?
5 " PALLIDIPENNIS.
6 " CRASSICORNIS.
7♂ ARRHENOPLITA CLAVICORNIS.
8, 8a♂ " DISTANS
9 " CIOIDES.
10 SAPTINE OVATA.
11♂ PLATYDEMA EXCAVATUM.
12 " MEXICANUM.
13♂ " UNDATUM
14♀ " UNDATUM, *var.*
15♂ " RODRIGUEZI
16 " DIOPHTHALMUM.
17 " TRANSVERSUM
18 " BISIGNATUM
19 PLATYDEMA HÖGEI.
20 " SEXNOTATUM.
21 " GUATEMALENSE.
22 " ORNATUM.
23 " PRETIOSUM
24 " PANAMENSE.
25 " TIBIALE.
26, 27 " 15-MACULATUM.
28 " BREVE.

W. Purkiss lith.

Hanhart imp.
428

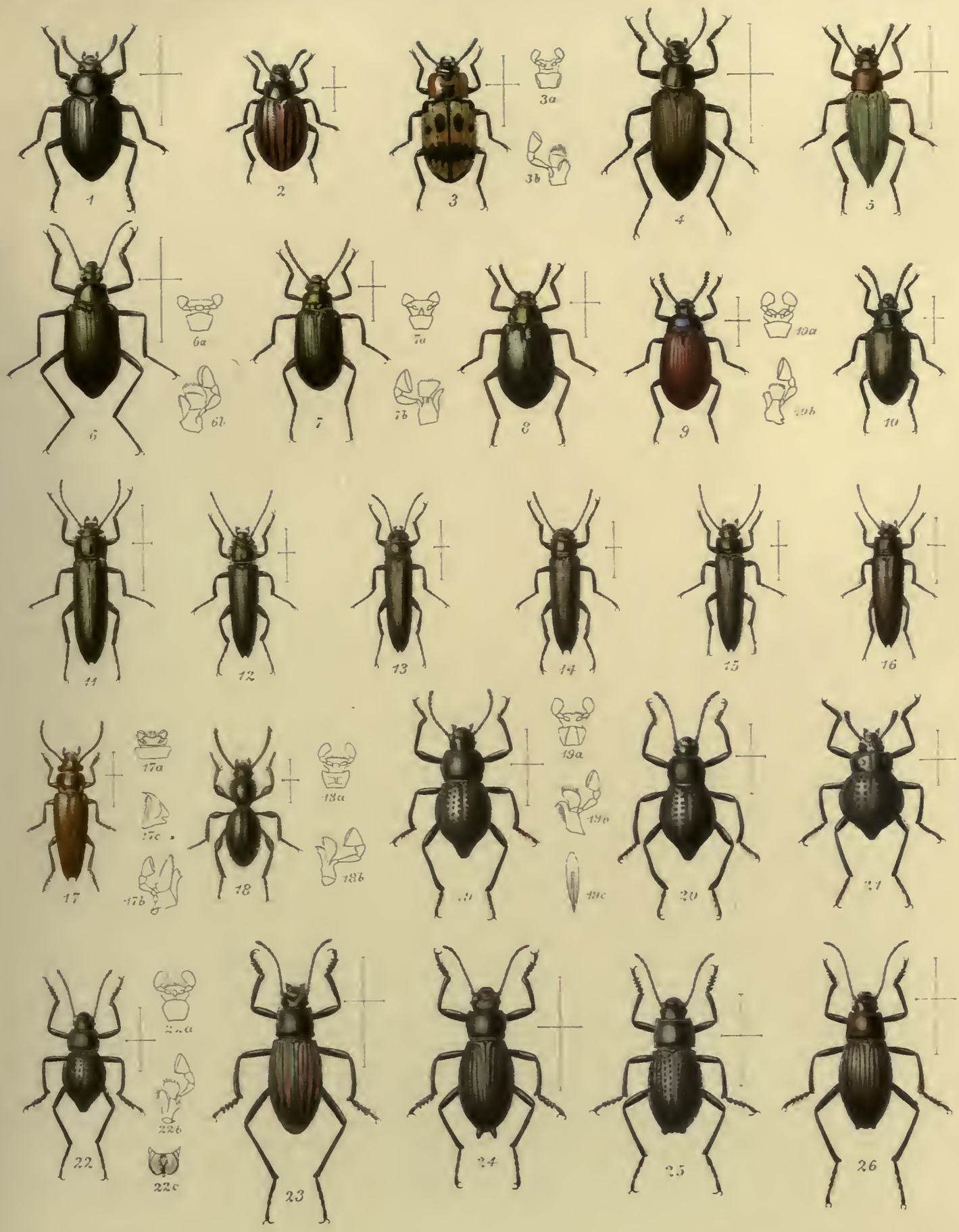
1,2 PLATYDEMA NIGROMACULATUM.
3 " VERSICOLOR.
4 " TRICOLOR.
5,6 " BIPLAGIATUM.
7 " DIMIDIATUM.
8 " ELEGANS.
9 " LUCENS
10 " CORDOVENSE.
11 " UNICOLOR.
12 PLATYDEMA VENUSTUM
13 LIODEMA KIRSCHI.
14 " ZIMMERMANI
15 " CONNEXUM
16 " " ,var CRUCIATUM
17 " SERRICORNE
18 " FLAVO-VARIEGATUM
19 STENOSCAPHA JALAPENSIS
20 COSMONOTA NIGRIPES.
21 COSMONOTA PUBESCENS.
22 ♂ PANIASIS DILATIPES.
23 ♂ LELEGEIS ÆNEIPENNIS.
24 ♀ HAPSIDA CHRYSOMELINA
25 ♀ " SERIATO-PUNCTATA.
26 ♂ " TEREBRANS
27 ♀ " BOUCARDI, var
28 ♂ " "
29 GONOSPA PHÆDONOIDES

W. Parkinson del.

Erichsen imp.

1 PHALERIA GUATEMALENSIS.
2 „ DYTISCOIDES.
3 „ NEOTROPICALIS.
4 „ INSULARIS.
5♂ BYCREA VILLOSA.
6 SCAPTES SQUAMULATUS.
7 XENIUS SCABRIPENNIS.
8 CALYMMUS VARIEGATUS.
9 OZOLAIS VERRUCOSA.
10 OZOLAIS LUTOSA.
11♂ „ ELONGATA.
12 GONIADERA OCULATA.
13 „ NICARAGUENSIS.
14 „ PILOSA.
15♂ „ ALTERNATA.
16 XANTHICLES CARABOIDES.
17 ANÆDUS MEXICANUS.
18 ANÆDUS MARGINATUS.
19 „ APICICORNIS.
20♂ „ BREVICOLLIS.
21 „ SETULOSUS.
22♂ PARATENETUS TIBIALIS.
23♂ „ RUFICORNIS
24♂ „ VILLOSUS.
25♂ „ TUBERCULATUS.
26♀ „ DENTICULATUS.

W. Parkins lith. Hanhart imp.



1 CYRTOSOMA DENTICOLLE
2 „ DECEM-LINEATUM
3 OTHRYONEUS EROTYLOIDES.
4 ♂ CAMARIA PARALLELA.
5 ♂ BLAPIDA NEOTROPICALIS
6 ♂ MOPHON TINCTIPENNIS.
7 ♂ EPICALLA VARIPES
8 „ LATA.
9 „ CUPREO-NITENS
10 ♀ MŒON PANAMENSIS
11 ♂ ACROPTERON BELTI
12 ♂ „ MÄKLINI
13 ♂ „ AGRILOIDES.
14 ♂ „ CALCARATUM
15 ♂ „ LONGIPENNE
16 ♂ „ MEXICANUM.
17 ISCHYOMIUS SINGULARIS.
18 PSEUDAPOCRYPHA LACORDAIRII.
19 ♂ OXIDATES PLANICOLLIS.
20 ♂ „ PRINCEPS
21 ♀ ISAMINAS GIBBIPENNIS.
22 ♂ SAZICHES SUBCAUDATUS.
23 ♂ HEGEMONA LINEATUS
24 ♀ „ BICAUDATUS
25 ♀ „ GUATEMALENSIS.
26 ♀ „ SUNILENSIS.

W. Pinkess lith.

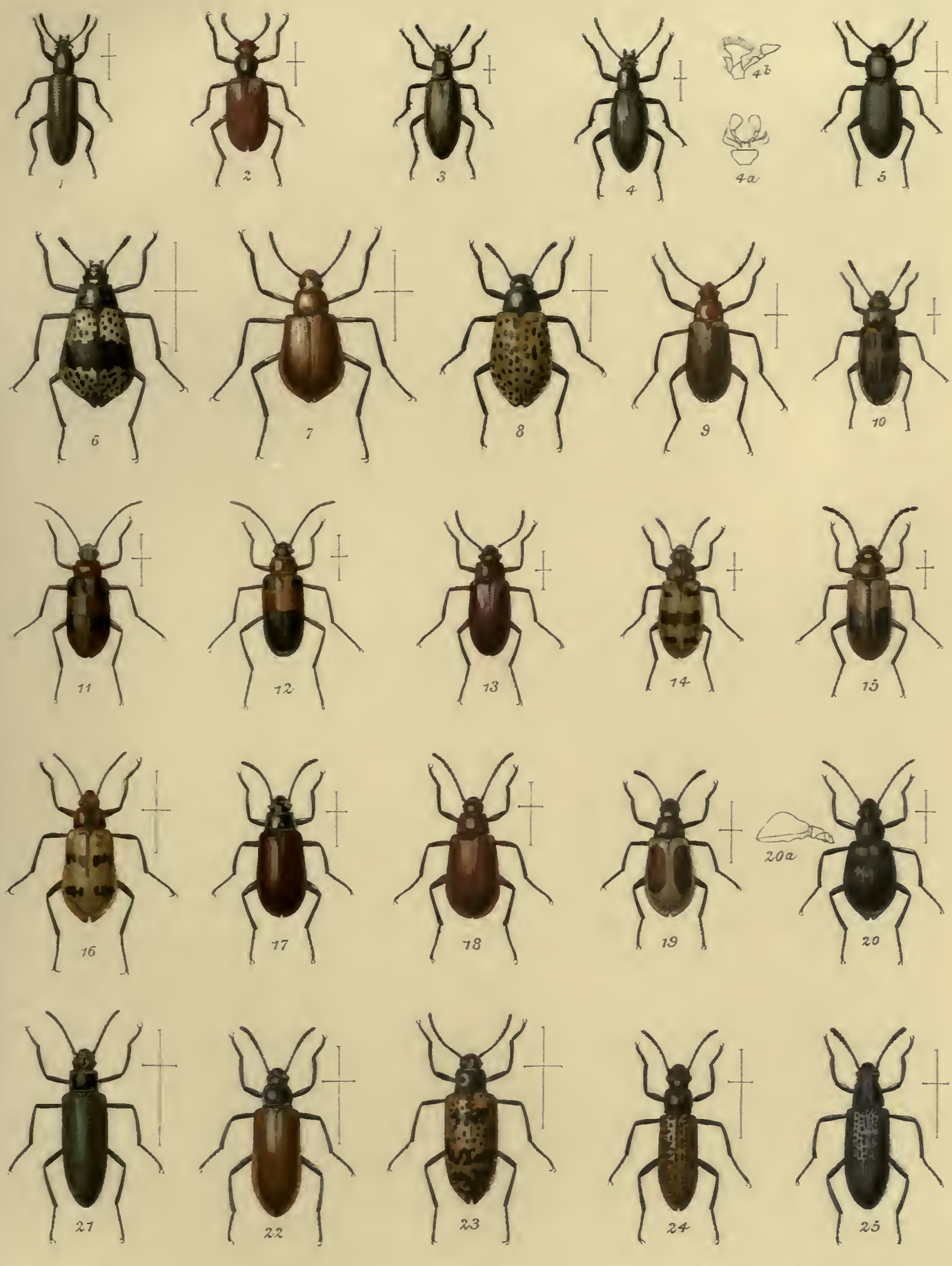
1♂ HEGEMONA COMPRESSUS.
2♂ " NIGER.
3♂ " ANGUSTATUS
4♀ " CHIRIQUENSIS.
5♀ " COSTARICENSIS.
6♀ " INTERRUPTUS.
7♀ NAUTES FERVIDUS.
8♀ " TINCTUS.
9♂ " BELTI.
10♀ NAUTES VARIANS.
11♂ " ANTENNATUS
12 " BREVICEPS.
13♂ " STRIATIPENNIS.
14♂ " CHRYSOMELOIDES
15♀ " VERSICOLOR.
16♀ " LÆVIVENTRIS.
17♂ " NITIDISSIMUS
18♂ NAUTES NODULOSUS.
19♂ " ENOPLOPOIDES
20♀ TARPELA TENUICORNIS
21♂ " INÆQUALIS.
22♂ " TORRIDA.
23 " CORPULENTA.
24 " THORACICA.
25 " COSTATA.
26 " FOVEIPENNIS

W. Purkiss lith.

Hanhart imp.
462.

1♂	TARPELA	EXIMIA.	10♂	TARPELA	TROPICALIS.	19♀	TARPELA	TOTONICAPAMENSIS.
2♂	"	VERÆPACIS.	11♀	"	SUBVITTATA.	20	"	DOCILIS.
3	"	ATRA.	12♂	"	DEPRESSA.	21♀	HELOPS	GRACILICORNIS.
4♀	"	SETIGERA.	13♂	"	CRASSIPES.	22♀	"	CAVIFRONS.
5♂	"	SOCIA.	14	"	ALLARDI.	23♂	"	EXSCULPTUS.
6	"	HISPIDULA.	15♀	"	AMABILIS.	24♂	"	RUGICEPS.
7♂	"	SUBPARALLELA	16♂	"	SILVICOLA.	25♂	"	COXALIS.
8♀	"	FALLAX.	17♂	"	FRAGILICORNIS.	26♂	"	PANAMENSIS.
9♂	"	CUPREOVIRIDIS.	18♂	"	CISTELIFORMIS.	27♂	"	SUMPTUOSUS.

W. Purkiss lith. Hanhart imp. 465.



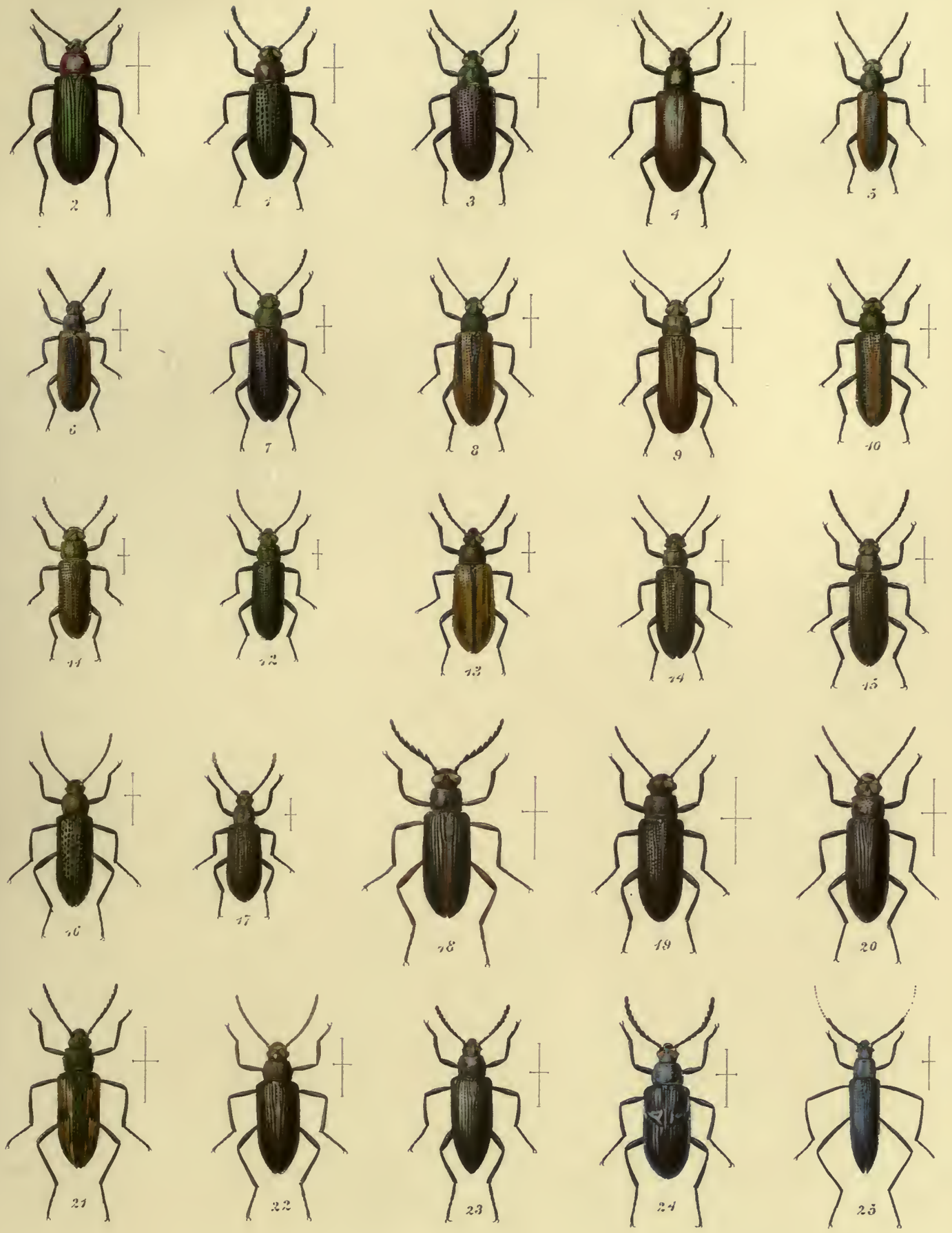
1 ♂ TALANUS NEOTROPICALIS.
2 ♂ " LATICEPS.
3 ♂ " GUATEMALENSIS
4 ♂ " APTERUS.
5 PYANISIA LONGICOLLIS.
6 ♀ CUPHOTES JANSONI.
7 ♂ " UNICOLOR.
8 ♂ PŒCILESTHUS NIGRO-PUNCTATUS
9 ♂ PŒCILESTHUS VARIPES.
10 ♀ " LATICOLLIS.
11 ♀ " FRAGILICORNIS.
12 ♂ " " ,var.
13 ♂ " IMMACULATUS.
14 ♀ " LÆVICEPS.
15 ♂ " MAKLINI.
16 ♂ STRONGYLIUM MACULICOLLE
17 ♂ " HÖPFNERI.
18 ♂ STRONGYLIUM HÖPFNERI, var. PECTORALE.
19 ♀ " CHONTALENSE.
20, 20a ♂ " GIBBUM.
21 ♀ " EMINENS.
22 ♀ " GERSTAECKERI.
23 ♀ " SALLÆI.
24 ♀ " CRIBRIPES.
25 ♀ " CONICICOLLE.

W. Purkiss lith.

Hanhart imp.
478.

1♀	STRONGYLIUM	SEMISTRIATUM.	9♀	STRONGYLIUM	VARIICORNE.	18♀	STRONGYLIUM	DECORATUM, *var.*
2♂	"	EXCAVATUM.	10♂	"	COSTARICENSE.	19♀	"	PANAMENSE.
3♀	"	CANALICULATUM.	11♀	"	COLOMBIANUM.	20♀	"	NITIDICEPS.
4♂	"	VIRIDIPES.	12♀	"	LANGURIOIDES.	21♀	"	VARIANS.
5♂	"	IGNITUM.	13♀	"	FRONTALE.	22♂	"	" , *var.*
6♀	"	TINCTIPES.	14♂	"	ATRUM.	23♂	"	MISANTLÆ.
7♀	"	EXARATUM.	15♂	"	OPACIPENNE.	24♀	"	CINCTUM.
8♂	"	FOSSIFRONS.	16♂	"	BIVITTATUM.	25	"	MARGINALE.
			17♀	"	AULICUM.			

W. Purkiss lith. Hanhart imp.



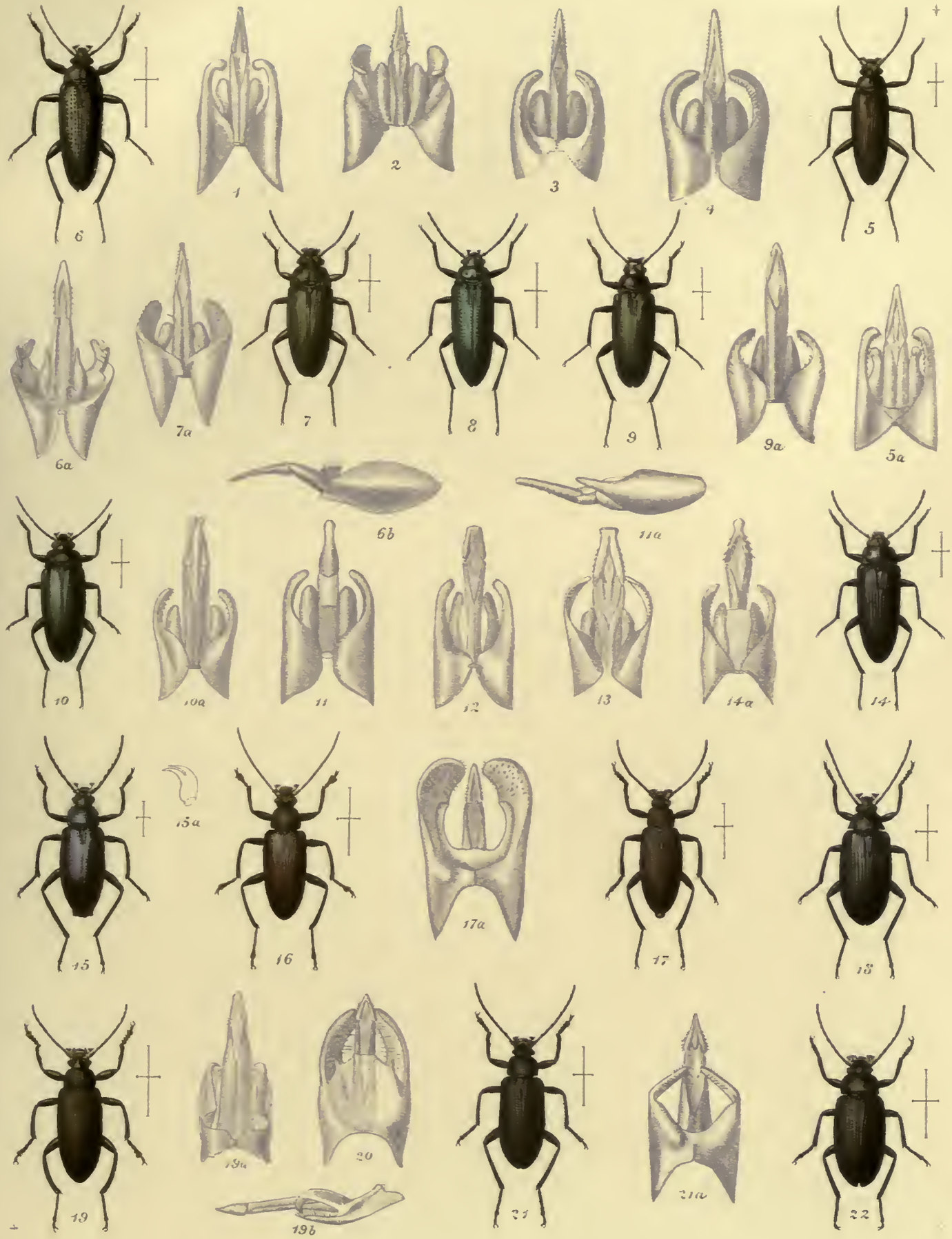
1 ♀ STRONGYLIUM VENTRALE.
2 ♂ " AURATUM.
3 ♂ " MISANTLÆ, *var.* β
4 ♀ " VIRIDITINCTUM.
5 ♂ " SUTURALE.
6 ♂ " CURTICORNE.
7 ♂ " RAMOSUM.
8 ♀ " BLANDUM.
9 ♂ STRONGYLIUM IMPRESSICOLLE.
10 ♀ " ARMATUM, *var.*
11 ♂ " BREVIPES.
12 ♂ " GREGARIUM.
13 ♂ " CARINIPENNE.
14 ♂ " PUNCTIPES.
15 ♂ " SUBCOSTATUM.
16 ♂ " APICICORNE.
17 ♂ " FRAGILE.
18 ♂ OTOCERUS DILATICORNIS.
19 ♂ " TOROLÆ.
20 ♂ " NICARAGUENSIS.
21 ♀ " INTERRUPTUS.
22 ♂ " HAMATUS.
23 " MICROPS.
24 ♀ " IMPRESSIPENNIS.
25 ♀ PSEUDOTOCERUS ATTENUATUS.

W. Purkiss lith.

Hanhart imp.
487

1 ♀	LOBOPODA	GIGANTEA.	9, 9 a ♂	LOBOPODA	ATRATA.	16 ♂	LOBOPODA	ATTENUATA.
2, 2a, b ♂	"	ASPERULA.	10 ♂	"	SUBPARALLELA.	17 ♂	"	TROPICALIS.
3, 3a ♂	"	ACUTANGULA.	11, 11a ♂	"	SERIATA.	18, 18a ♂	"	FEMORALIS.
4, 4a ♂	"	TRISTIS.	12 ♂	"	CONVEXICOLLIS.	19 ♂	"	HIRTA.
5, 5a ♂	"	MEXICANA.	13 ♂	"	OBLONGA.	20 ♂	"	SCULPTURATA.
6, 6a ♂	"	PANAMENSIS.	14, 14a, b ♂	"	PUNCTICOLLIS.	21, 21a, b ♂	"	LÆVICOLLIS.
7 ♀	"	MUCRONATA.	15, 15a ♂	"	YUCATANICA.	22 ♂	"	SIMPLEX.
8, 8a ♂	"	APICALIS.				23, 23a ♂	"	OPACA.

G. S. Saunders & W. Purkiss del. & lith. Hanhart imp.



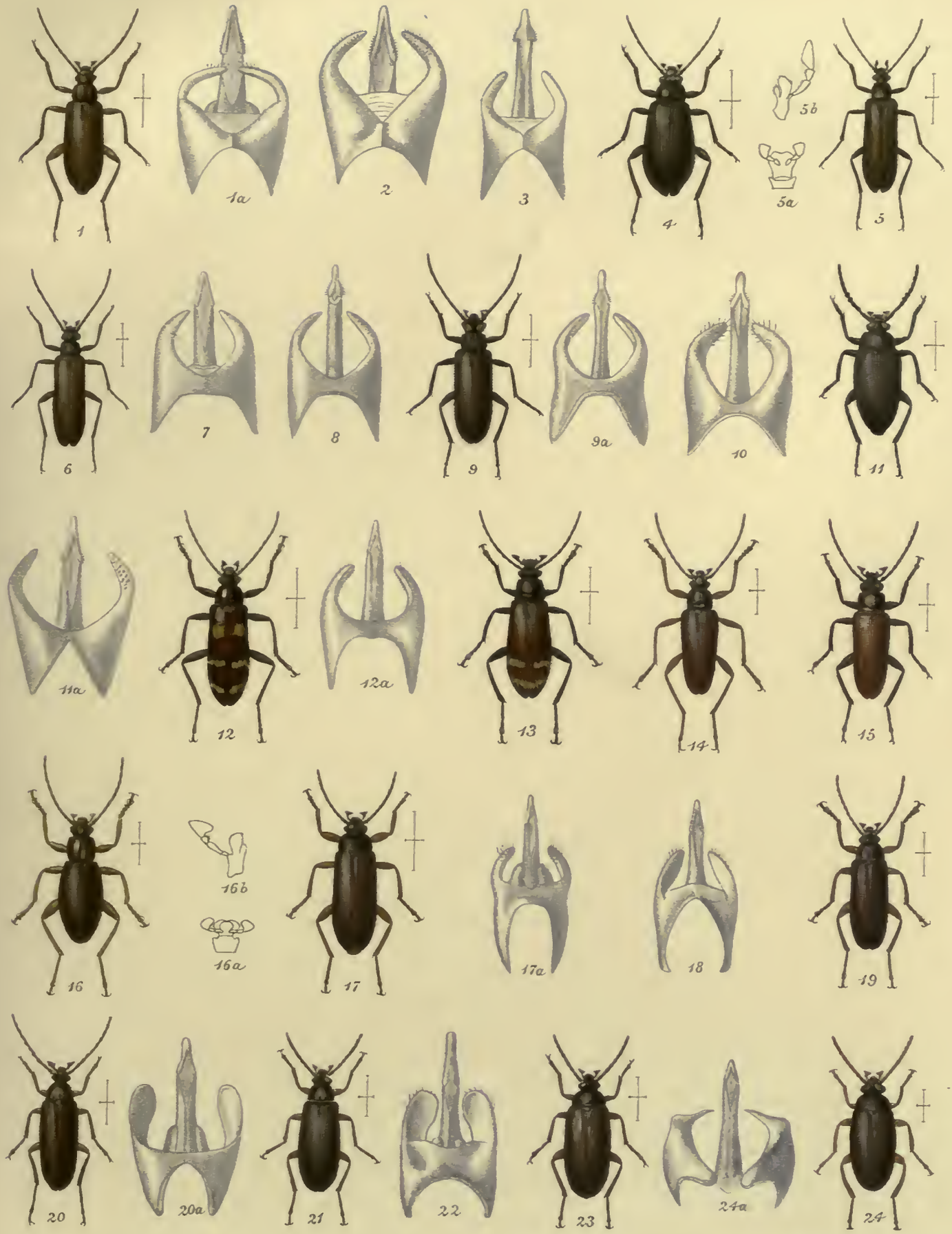
1♂ LOBOPODA PROXIMA.
2♂ " JALAPENSIS.
3♂ " PARVULA.
4♂ " MINUTA.
5, 5a♂ " TENUICORNIS
6, 6a, b♂ " VIRIDIS.
7, 7a♂ " FOVEATA

8♀ LOBOPODA NITENS.
9, 9a♂ " IRAZUENSIS.
10, 10a♂ " VIRIDIPENNIS.
11, 11a♂ " ÆNEIPENNIS.
12♂ " CARINIVENTRIS.
13♂ " OBSOLETA.
14, 14a♂ " GLABRATA.
15, 15a♂ TEMNES CÆRULEUS.

16♀ ALLECULA CASTANEIPENNIS.
17, 17a♂ " RUGICOLLIS.
18♀ " VERÆPACIS
19, 19a, b♂ " FEROX.
20♂ " GAUMERI.
21, 21a♂ " PILIPES
22♀ " BELTI.

G S Saunders & W Purkiss del & lith

Hanhart imp



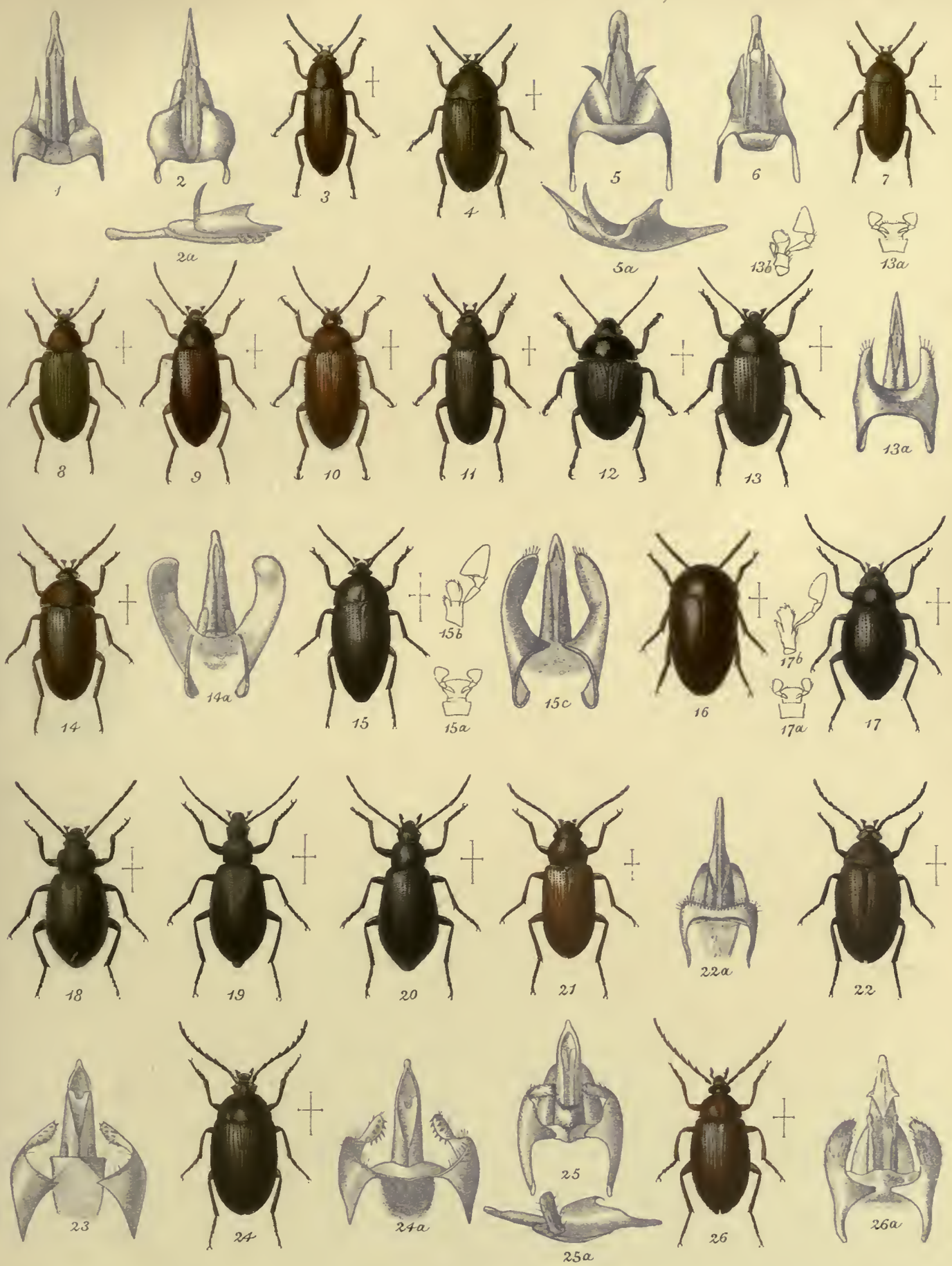
1,1a♂ ALLECULA DEPRESSA.
2♂ " . OPACIPENNIS.
3♂ " ANGUSTATA.
4♀ " LATICEPS.
5,5a,b♂ ALETHIA SALLÆI.
6 " LONGIPENNIS.
7♂ " SUBNITIDA
8♂ " AZTECA.

9,9a♂ ALETHIA LEPTUROIDES
10♂ " HÖGEI.
11,11a♂ THEATETES BASICORNIS
12,12a♂,13♀ CHARISIUS FASCIATUS.
14♂ " ZUNILENSIS.
15♂ " SALVINI.
16,16a,b♂ NARSES SUBALATUS.

17,17a♂ HYMENORUS OCCIDENTALIS.
18♂ " BREVICORNIS.
19♂ " TARSALIS.
20,20a♂ " OCULATUS
21♂ " PINI.
22♂ " SORDIDUS.
23 " FLOHRI.
24,24a♂ " TIBIALIS.

G.S. Saunders & W. Purkiss del. & lith.

Hanhart imp.



1♂ HYMENORUS HISPIDULUS.
2,2a♂ " FOVEIVENTRIS.
3♂ " LONGICOLLIS.
4 " COLONOIDES.
5,5a♂ " SIMILIS.
6♂ " BADIUS..
7♂ " BREVIPES.
8 " RUFICOLLIS.
9 " GUATEMALENSIS.
10♀ HYMENORUS VILLOSUS.
11♂ " DEPLANATUS.
12 MENES MERIDANUS.
13,13a,b,c♂ POLYIDUS MERIDIONALIS.
14,14a♂ MENŒCEUS CRASSICORNIS.
15,15a,b,c♂ " ÆQUALIS.
16♂ DIOPŒNUS COMPRESSICORNIS.
17,17a,b♂ PITHOLAUS HELOPIOIDES.
18♀ PHEDIUS CHEVROLATI.
19♀ " CARBONARIUS.
20♀ " CYLINDRICOLLIS.
21 TELESICLES CORDATUS.
22,22a♂ CISTELA NIGRICORNIS.
23♂ " DECEPTA.
24,24a♂ " CHIRIQUENSIS.
25,25a♂ " DELITESCENS.
26,26a♂ " OCCULTA.

G.S. Saunders & W. Purkiss, del et lith

Hanhart imp.
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1♂ CISTELA ALTERNANS.
2♀ " FRAGILICORNIS
3♂ ISOMIRA OBSOLETA.
4 " SUBÆNEA.
5, 5a, b♀ ERXIAS VIOLACEIPENNIS.
6♂ PROSTENUS PANAMENSIS.
7 LYSTRONYCHUS PILIFERUS.
8 " PURPUREIPENNIS.
9♂ " SCAPULARIS.
10 XYSTROPUS FULGIDUS.
11 " FALLAX.
12 " LEBASI.
13 CTEISA PEDINOIDES.
14 OTHNIUS SENECIONIS.
15, 15a♂ " ANTENNALIS.
16 " MULTIGUTTATUS.
17 " INTRICATUS.
18 OTHNIUS MEXICANUS.
19 " STICTICOPTERUS.
20 NILIO THOMSONI.
21 " CHIRIQUENSIS.
22 HYPORHAGUS OPUNTIÆ.
23 " DURANGOENSIS.
24, 24a♂ " EMARGINATUS.
25 " OBLITERATUS.
26, 26a ASPATHINES OVATUS.

W. Purkess lith. Hanhart imp.

1 PIMELIOPSIS GRANULATA.
2 TRIMYTIS OBOVATA.
3 ARÆOSCHIZUS MEXICANUS
4, 4a ♀ EPITRAGUS CRISTATUS.
5 ♀ " CANUS.
6 ZOPHERUS NODULOSUS, *var.*
7 " ELEGANS.
8 ♀ ASIDA GEMINATA.
9 ♀ ASIDA INTRICATA.
10 " FLOHRI.
11 " SPINIMANUS.
12 " TENEBROSA.
13 " HORRIDA.
14 " MORICOIDES
15 " FURCATA
16 " FŒDA
17 " TARDA.
18 ASIDA LATISSIMA
19 " UNICOSTATA.
20 " INGENS.
21 " FASCICULATA.
22 ASTROTUS NOSODERMOIDES.
23 OLOGLYPTUS HEBES
24 BRANCHUS OPATROIDES.
25 ASTROTUS UNDATUS

W. Purkiss lith. Hanhart imp.
604

1♂ CENTRONOPUS BIMACULATUS
2,2a♂ PHTHORA ARMATA.
3,3a-c ZYPŒTES EPIEROIDES.
4,4a ENNEBŒUS UNIFORMIS.
5 ÆMYMONE CRENATA.
6 ANÆDUS VILLOSUS.
7,7a♂ PARATENETUS NIGRICORNIS.
8,8a♂ " CONSTRICTUS.
9♂ " SEXDENTATUS.
10 OXIDATES GIBBUS
11♂ TARPELA CATENULATA.
12♂ " PULCHRA.
13 HELOPS ENITESCENS.
14,14a♀ MENTES RUFICOLLIS.
15♀ " FUSIFORMIS.
16,16a STRONGYLIUM CLAVICORNE.
17 PŒCILESTHUS CUPRIPENNIS.
18♀ AMAROPSIS ANNULICORNIS.
19♂ CISTELA OVIPENNIS.
20 ÆANES ANGUSTICOLLIS.
21♂ CHARISIUS PICTURATUS.
22 HYPORHAGUS SUTURALIS.
23,23a♂ LOBOPODA CALCARATA.
24♂ " TEAPENSIS.
25 HYPORHAGUS FERRUGINEUS.
26♀ PHEDIUS HIRTUS.

W. Purkuss lith. Hanhart imp.

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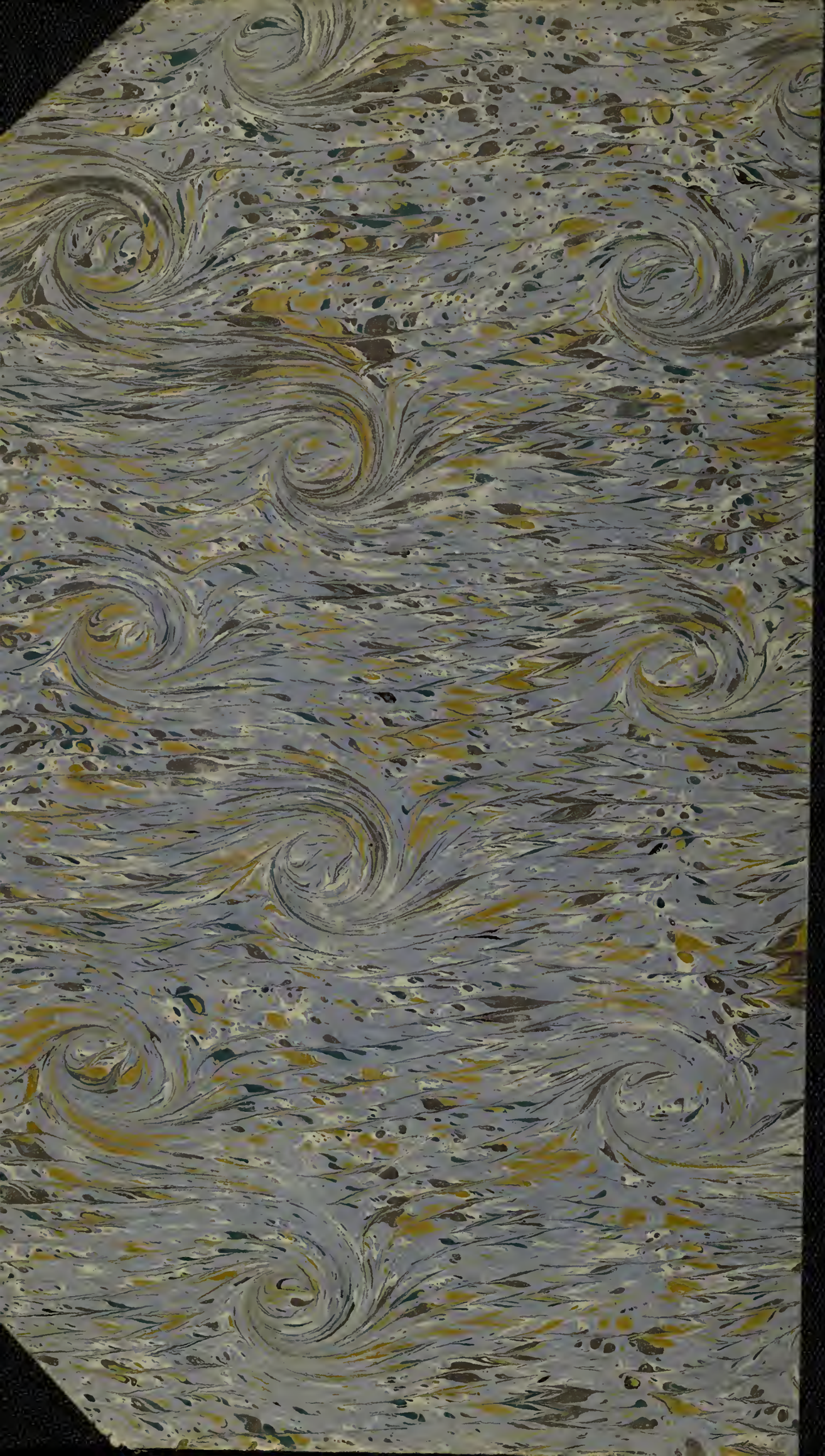
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